Art Inquiry. Recherches sur les arts 2025, vol. XXVII
ISSN 1641-9278 / e - ISSN 2451-0327 / https://doi.org/10.26485/AI/2025/27/19

Received: 2025-07-30
Revised: 2025-09-09; 2025-10-13
Accepted: 2025-10-15

Ryszard W. Kluszczyński
https://orcid.org/0000-0003-1073-9805
University of Łódź
ryszard.w.kluszczynski@uni.lodz.pl

THE ART OF POST-ANTHROPOCENTRISM: CONCEPTS, CHALLENGES, DILEMMAS

Abstract: Posthumanism and post-anthropocentrism have significantly impacted the most important aspects of the art paradigm, transforming the concept of artistic creation and creating new challenges for its audience. By proposing different rules for governing the relationship between humans and non-human entities than in the traditional humanist system, they lead to the formation of new concepts of creative agency, to the transformation of the nature and status of the artwork, as well as to changes in the characteristics of its reception. Aesthetics and art theory, which have undergone numerous upheavals since the mid-twentieth century, are thus exposed to new challenges. In this article, I look at selected processes from this field and consider some theoretical concepts and the artistic practices that have evolved from them, and which have had a significant impact on the formation of a new situation in the field of art. In particular, I examine the issues of the Anthropocene, territory, holobiont and transgenic creation, focusing on several exhibitions presented in recent years that address the indicated issues and present related art trends, as well as citing and analysing selected works from the field.

Keywords: Anthropocene, ecological art, holobiont, post-anthropocentrism, symbiontic art, territory, transdisciplinary art, non-human creativity.

Introduction

Challenges arising from the Anthropocene have evoked numerous and varied responses from the art world, particularly in transdisciplinary and critical tendencies within it. I refer to all of these as post-Anthropocene artistic

actions, that is, practices developed in the context of the Anthropocene and aimed subversively against it, actions that are inevitably part of it but seek to understand, transcend and ultimately abolish it.

An important aspect of these practices is post-anthropocentrism. It proposes different rules governing the relationship between humans and non-human entities. Many artists have abandoned the conviction of humanity's superiority over other creatures, while proclaiming human responsibility for the continued existence of the world and its condition. They are accompanied in this work by researchers and curators for whom these issues are equally important. In reflecting on artistic activities in this field, specific questions arise: Can art contribute to stopping the Anthropocene or influence the formation of a social movement of resistance to it? What is the result of the dominance of anthropocentric attitudes in the human world and how is this related to the Anthropocene? Which features of human civilisation need to be modified so that the Anthropocene and its consequences can be effectively resisted? How can we engage in reflection or practices that express a non-anthropocentric perspective without simultaneously becoming embroiled in ideological discourse or falling into the postcolonial illusions and claims that can easily arise when we ascribe to ourselves the ability to speak on behalf of other species? How do we save the future of our planet? How does the positioning of artistic practices within a postanthropocentric paradigm affect art itself and its fundamental categories, such as the artwork or the concept of creativity?

These and many other questions that have come to preoccupy artists and art scholars can be recognised as sources from which numerous critical, transdisciplinary research and art projects have emerged. It is precisely transdisciplinary works carried out within the realm of artistic research, a field of radical post- and transhumanist creativity that often functions within the world of new media art, that constitutes the most significant response from the art world to the questions raised above. These art projects focus on selected issues that are pieces of a larger puzzle. Together, they form a holistic response by art to the challenges posed by the Anthropocene. In this article, I focus on only some of them. In each section, I examine selected concepts and strategies employed by artists attempting to confront the Anthropocene and anthropocentrism by subjecting them to artistic, analytical and subversive deconstruction, while also seeking to halt their further development and supporting the formation of a non-anthropocentric social consciousness.

I have previously addressed the general issue of artistic struggles with the Anthropocene, analysing selected works and the types of activities undertaken by artists for this purpose, and reflecting on the strategies they employ in their

research and publications[1]. I have also analysed the transdisciplinary aspects of these activities[2]. In this article, in addition to reflecting on artistic attitudes towards the Anthropocene paradigm and the use of new media for this purpose, I also reflect on the categories of *territory* and *holobiont*, together with related creative attitudes, and examine the concept of non-human creativity and its influence on art theory and aesthetics. In my reflections here, I also cite selected art exhibitions that represent well the issues under analysis, treating these exhibitions as institutional and curatorial research approaches. They were realised over the last few years, and my use of them as the subjects of my research is intended to help illustrate that the issues addressed in these reflections represent the most current trends in art. Moreover, the exhibitions enable us to observe how the interests of the artists, curators and researchers working with them intersect, which also reveals a great deal about the prevailing tendencies in the world of progressive and avant-garde art.

In the first part of the article, I reflect on a selection of art projects created by artists who are facing the challenges of the Anthropocene. I subject selected works to analysis, pointing out how new-media technologies are used in them to address and make visible the problems they address. In this section, I focus on the exhibition Planet B: Climate Change and the New Sublime.

One of the most common responses given by art to the challenges of non-anthropocentrism is the proposal to think and feel with someone or something, i.e., to adopt a territorially defined perspective. Therefore, the second part of my reflections focuses on the concept of *territory* and artistic practices that seek to develop this perspective. An exhibition that represents this tendency is Science Friction: Living Among Companion Species.

In the third part of the discussion, I examine selected works that focus on holobiontic structures. Borrowed from Adolf Meyer-Abich and Lynn Margulis, and popularised in the humanities and social sciences by Bruno Latour, among others, the term *holobiont* denotes a group of living beings related to each other in symbiotic configurations. In principle, all kinds of living creatures can participate in such communities, in which a host is linked to a specific microbiome. The concept of the holobiont introduces a standard measure and scale for all

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1 See R.W. Kluszczyński, *Looking at the World through the Eyes of the Other? Art as Non-Anthropocentric Ecology*, in: *Towards a Non-Anthropocentric Ecology. Victoria Vesna and Art in the World of the Anthropocene*, ed. R. W. Kluszczyński, Laznia Centre for Contemporary Art – Łódź University Press, Gdańsk-Łódź 2020, pp. 6-27; Idem, *Art and the Challenge of the Anthropocene*, ibid., pp. 238-279.

2 See e.g., idem, *Transdisciplinarity: Art, Science, the Humanities, and Politics*, in: *Beyond Borders. Processed Body – Expanded Brain – Distributed Agency, Second edition, supplemented with illustrations*, ed. R.W. Kluszczyński, Laznia Centre for Contemporary Art – Łódź University Press, Gdańsk-Łódź 2021, pp. 302-327.

of these creatures, without privileging any particular ones, but instead assigning to each different roles or functions within the overall system. This concept is founded on the community and symbiotic interdependence, even if, as often happens, they are shaped within a common territory. Art that utilises the concept of the holobiont as a conceptual tool often interprets it in unconventional ways, building holobiontic communities that deviate, sometimes significantly, from the patterns and schemes developed in the life sciences. The exhibition I focus on here is Symbionts: Contemporary Artists and Biosphere.

In the final section, I explore the issues of non-human creativity and transspecies aesthetics, drawing on the work of artists who are developing an intergeneric dialogue in their art and introducing new concepts of creativity. I emphasise the importance of artistic research and transdisciplinarity in shaping such practices. The most important exhibitions in this section of the article are those that comprise this year's Helsinki Biennale.

In all parts of my reflections here, the central categories of the Anthropocene, territory, holobiont and transdisciplinary creativity are considered first as separate, autonomous concepts and without reference to their interrelationships. Only in the article's conclusion do I point out and emphasise the very close interrelationships between them.

Anthropocene

Art that develops in the context of the Anthropocene addresses a wide variety of topics. It refers, for example, to issues such as global warming and atmospheric pollution, the mass extinction of species, soil poisoning, deforest-ation, the imbalances in the relationship between human civilisation and the evermore rapidly disappearing natural world, and the pollution of the natural environment by the proliferent non-biodegradable waste of human activity. Art practices *artistic research* by directing attention to specific cases like these, which through the audience's experience can then develop into more general considerations. Qualitative and post-qualitative methods[3] are the most commonly chosen research strategies here.

A great deal of contemporary artwork addressing ecological issues directs attention towards water and aquatic life, as seen in the growing number of publications on the subject[4]. There are many reasons for this. The association of

3 See K. Kerasovitis, *Post Qualitative Research – Reality through the Antihierarchical Assemblage of non-Calculation*, "The Qualitative Report" 2020, vol. 25, no. 13, pp. 56-70.

4 See, for example,"Open Rivers" Summer 2016, vol. 3 (*Water, Art & Ecology*); *Plastic Ocean: Art and Science Responses to Marine Pollution*, ed. I. Reichle, De Gruyter, Berlin-Boston 2021.

water with the origins of life on Earth, and the dominant contribution of bodies of water and their biosphere to the maintenance of the Earth's atmosphere and life as we know it, not only delineate the vast symbolic space to which art refers, but also generate the wide field of issues that artistic ecological currents address. Here, I will look at only a selection of works by three female artists active in this field: Viktoria Vesna, Jill Scott and Robertina Šebjanič. Their works represent different approaches, and the authors try to achieve different goals and use different methods. However, all of them create works of *artistic research* using new media technologies, which demonstrates the importance of contemporary new media technologies for ecological, post-Anthropocene artistic discourses.

It is estimated that 50–80% of the Earth's oxygen production comes from water bodies, primarily the oceans, through plankton and photosynthesising microorganisms. These absorb carbon dioxide and produce oxygen. It can be assumed that we owe two out of every three of our breaths to them. Furthermore, plankton are one of the basic elements of the marine food chain and consequently act as a key component of the Earth's ecosystem. However, as Victoria Vesna demonstrates in her multi-faceted[5] work *Noise Aquarium* (2016–), which has taken the form, thus far, of extended photographs (AR photos), video projections, an interactive installation, a VR installation and a collective online meditation, as humans we do a great deal to disrupt these important processes for the homeostasis of the earthly world.

In this project, the artist focuses her attention on human-generated sounds. Several studies have already shown how various noise sources negatively affect large marine animals such as whales and dolphins. However, few of these studies sufficiently highlight the effects of noise on microscopic organisms that escape normal perception, such as plankton. Meanwhile, it is well known that certain sounds, particularly ultrasound produced during offshore oil and gas operations or sonar sounds, are harmful or even deadly to plankton. The artist wanted to immerse the audience of the work in an oppressive, intolerable sound environment to effectively bring them to the awareness that "underwater noise destroys so much marine life that it has direct effects on all living things"[6]. *Noise Aquarium* presents animated 3D models of an extremely diverse spectrum of plankton, obtained using scientific imaging techniques. Projected onto screens, experienced interactively or virtually, these creatures make their

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5 On the multiformity of works of art, see R.W. Kluszczyński, *The Work of Art as a Collection. Violence, Death and Loss in the Art of Luz María Sánchez*, "Art Inquiry" 2021, vol. XXIII, pp. 283-288.

6 V. Vesna, A. Nacher, *Diving Deep into the Blue Planet, Flying High into the Cosmos*, in: *Towards a Non-Anthropocentric Ecology*..., pp. 212-213.

way into the field of human contact. They have the chance to draw attention to themselves. Enlarged and animated images evoke reactions that are as much aesthetic as they are cognitive and emotional. The aesthetic and affective experience shaped in this way creates the possibility of looking beyond the limits of mere visibility and audibility, the possibility of seeing micro beings whose fate is conditioned by forms of human activity, the same ones whose future is reciprocally linked to the well-being of the oceanic microworld. Aesthetic delight is here complemented by a rational ethical emotion.

Jill Scott's interactive installation, *Jellyeyes* (2016), emerges from the nexus of interactive art, ecology and neuroscience. She proposes an augmented reality (AR) experience that, in this case, offers viewers a glimpse into the evolutionary process of our human eyes and indicates their affinity with the eyes of the Australian fescue and squid. As the artist points out, *Jellyeyes* provides interactions with virtual aquatic creatures in the context of an artistic discourse on coevolution, structural evolution and comparative evolution. It also prompts reflection on the impact of global warming on all these evolutionary processes. Set in the visual environment of the Great Barrier Reef, the *Jellyeyes* installation – through the use of AR technology – allows interactive viewers to look through the eyes of two aquatic creatures to provoke reflection on the evolution of sight and its relationship to symbiosis, movement, survival and the environment. This reflection can help us see that we are, as the artist believes, much closer to marine animals than we might think.

Scott adopts the artistic strategy of comparatively linking the characteristics of the human visual apparatus with the perceptual mechanisms characteristic of other creatures, noting how these characteristics are then inscribed in the technologies of vision, in the construction of their apparatuses. She declares questioningly: "Did you know that your eyes are the eyes of a fish!"[7] She builds an embodied discourse by immersing the audience in an AR experience that leads them through a succession of astonishing experiences until they discover that all life forms are somehow interconnected in the Earth's ecosystem.

Slovenian artist Robertina Šebjanič devotes a great deal of her work to aquatic issues. She addresses issues related to the pollution of aquatic environments and the ecological catastrophe connected with it, and explores the condition of the Earth's waters in the context of the Anthropocene in her works. She is interested in the effects of noise on the aquatic systems of seas, lakes and rivers, and conducts related bioacoustic research. In her research journeys, she documents underwater sound pollution, creating databases which she then uses in installations and performances. Šebjanič's project *Aquatocene*

7 J. Scott, *Reflections on Visual Perception*, in: *Beyond Borders*..., p. 133.

/ Subaquatic – Quest for Serenity, realised since 2014, is entirely dedicated to this issue. In her presentations (installations, performances, vinyl records), the artist juxtaposes the natural sounds of marine life with human-generated noise. *Aurelia's 1+Hz* project, also carried out over a number of years, directs our interest towards technology-mediated relationships between animals and humans and interspecies communication. In her work *aqua_forensic* (2018), Šebjanič addresses chemical contamination of water. In *Lygophilia* (a project initiated in 2017), she focuses her attention on two endangered species – Axolotl and Proteus – combining biological and ecological themes with cultural ones. A whole series of works founded in research are emerging from this project. Its most recent exhibition presentation at the Kunstgewerbemuseum in Berlin, titled *Lygophilia – Aquatic Life: A Symbol of Extinction, Scientific Wonder and Cultural Heritage* (14.09.2024–05.01.2025), includes four works growing out of the project, realised in different media (installations, video essay, sound composition).

Robertina Šebjanič, like the previously mentioned artists, collaborates with other artists and researchers on her transdisciplinary projects and combines artistic, scientific, philosophical and ethical perspectives. She tries to problematise dominant narratives and make visible how they shape our reality[8].

The exhibition *Planet B: Climate Change and the New Sublime* (Palazzo Bollani, Venice, 20.04–27.11.2022) presented works by male and female artists who are responding to ecological challenges in different ways and drawing attention to the consequences of unsustainable development and the expansion of the Anthropocene. Its curator, Nicolas Bourriaud, in the book accompanying the exhibition, proposes to rehabilitate the aesthetic category of the sublime. He considers it the most appropriate concept for the analysis of art during the Anthropocene. He points to three supporting reasons for this: "1. The sublime expresses the relationship between the human race and nature, including its immersion in landscape and atmosphere. 2. Originally defined as delightful horror, it explains the sense of danger and loss of control that we experience today with climate change. 3. It delineates a realm of limitless, unscalable forms: nowadays, what the Anthropocene has shown is precisely a crisis of human scale"[9]. Bourriaud points out that the works in the exhibition explore the relationship between humans and the environment, making visible the confusion and loss of control over the processes set in motion and their results, as well as the scale of human actions and expectations of reality.

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8 *From Anthropocene to Aquastocene: An Interview with Robertina Šebjanič*, https://shapeplatform.eu/2017/from-anthropocene-to-aquatocene-an-interview-with-robertina-sebjanic/ [accessed 30.11.2024].

9 N. Bourriaud, *Planet B. Climate change and the new sublime, Les presses du réel*, Dijon 2022, p. 10.

Territory

A territory, according to Bruno Latour, is not a place where we are located in terms of geographical coordinates, but rather a network of relationships on which we depend[10]. Thus, when we think of territory, we can refer to the immediate surroundings inhabited by the beings on whom our life and its quality depend, as well as to the entire planet (James Lovelock's concept of Gaia, adopted by many researchers). Territory is a system of connections that transforms individual entities into a hybrid community, a trans-species web of interconnectedness. It is a complex, multi-species, mutually contingent communal life. The art that emerges from such thinking also frees itself from an individualistic stance, seeking community justifications for itself.

It is worth noting the emphasis in contemporary art discourse on the importance of social relations, in particular those it initiates or in which it participates. In his book *Relational Aesthetics*, published in 1998, Nicolas Bourriaud emphasised that art can be used to build or support interpersonal bonds, rather than take on the form of individual expression[11]. The exhibitions he curated in the 1990s include many examples of this. Recent decades, however, have brought a significant change in this approach: the relationships formed are not meant to connect only people, but all living beings. This new perspective is also featured in Bourriaud's latest book, which accompanies the exhibition *Planet B: Climate Change and the New Sublime*, mentioned in the previous section[12]. A comparison of these two publications by Bourriaud says a great deal about transformations in progressive, contemporary art and its reception over the last three decades.

The exhibition *Science Friction: Living Among Companion Species* (Centre de Cultura Contemporŕnia de Barcelona, 12.06–28.11.2021, curator Maria Ptqk), which is the most important reference in this part of the discussion, shared many characteristics with some other contemporary museum presentations in which works of art are juxtaposed with technical inventions, products of scientific research or theoretical concepts. A precursor exhibition for this tendency was *Cybernetic Serendipity*, presented at the Institute of Contemporary Art in London in 1968 (curated by Jasia Reichardt). This exhibition presented not only works of cybernetic, robotic and computer art, but also the technologies from which these art tendencies emerged, and among its participants we could find not only artists but also scientists and engineers. As a contemporary continuation, one can point to the two-part exhibition realised at the

10 B. Latour, *How to Inhabit the Earth: Interviews with Nicolas Truong*, Polity, Cambridge 2024.
11 N. Bourriaud, *Relational Aesthetics*, Les presses du réel, Dijon 1998.
12 Idem, *Planet B*...

Center for Art and Media, Karlsruhe (ZKM): *Open Codes*. 1. *Living in Digital Worlds* (20.10.2017–05.08.2018), 2. *The World as a Field of Data* (01.09.2018 –07.04.2019) (curators: Peter Weibel, Livia Nolasco-Rózás, Blanca Giménez). Part One showed "many different examples of codes, from Morse code to genetic code, as well as their applications in art and industry", while Part Two explored "a world that is not entirely generated, directed and controlled by things, words and images, but primarily by data. Living in digital worlds increas-ingly means living a life spent in a programmed, intelligent environment"[13]. A similarly complex exhibition was *Critical Zone. Observatories for Earthly Politics*, ZKM (23.05.2020–09.01.2022, curators Peter Weibel and Bruno Latour), which addresses issues related to the Anthropocene, and ZKM's latest project: *Fellow Travellers. Art as a tool to change the world* (21.09.2024–08.06.2025, curated by Alistair Hudson), with an emphasis on participation, where, as ZKM's website reads, "artists, scientists, communities and citizens can collaborate and learn from each other" to find "new, practical ways to shape our planetary coexistence"[14].

In the long list of participants in the *Science Friction* exhibition, we find, in line with the trend outlined above, not only artists such as Ernesto Casero, David Domingo, Susana Talayero or Maria Sibilla Merian[15], but also researchers such as the philosopher Vinciane Despret; biologists Mercè Piqueras and Lynn Margulis, who introduced the concept of the holobiont into scientific circulation; and the creators of concepts that, although not recognised as scientific discoveries, nevertheless gained fame and influenced the collective imagination, such as Cleve Backster, who, after years of working with the variograph, began experimenting with plants in 1966 to discover (by studying their electrical activity) that they respond, in his opinion, to the thoughts, feelings and hostile attitudes of humans and animals towards them. He referred to this phenomenon as *primary perception*, considering it to be a kind of cellular perception, close to (or similar to) telepathy. Some of the participants I find particularly interesting in relation to the profile of the exhibition, including Louis Bec, Paula Bruna, Petra Maitz and Pinar Yoldas, combine these two spaces of action – art and science – in their work. The exhibition programmatically invited artists, thinkers, scientists and activists to work together. The diversity of the proposals indicates a second, no less important aim of the exhibition, alongside the presentation of art: to show and support a post-anthropocentric, transdisciplinary perspective on the world.

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13 P. Weibel, *Open Codes. The World as a Field of Data*, ZKM, Karlsruhe 2019, p. 3.

14 https://zkm.de/en/exhibition/2024/09/fellow-travellers. [accessed 31.08.20925]

15 The presence of the latter, who lived between 1647 and 1717, signals that the ambition of the curator of the exhibition was to show not only recent trends in the field under study, but also their historical roots.

The *Science Friction* exhibition says that all forms of life on Earth are connected by relationships of interdependence. Plants, animals, fungi, bacteria and other microorganisms are part of interconnected ecosystems. In this symbiotic vision of life, humans cease to be at the forefront of evolutionary history and become just one more species that is vulnerable.

The title *Science Friction* points, on the one hand, to the scientific and cultural frictions and conflicts associated with the emerging concept of universal symbiosis and the understanding of life as a network of interspecies interdependence, notions which are in opposition to traditional ideas about the place, role and significance of the human race and destabilise the idea of the individual; on the other hand, it also speaks to the urgent need to situate oneself within this emerging interspecies paradigm and change prevailing narratives[16]. As the exhibition curator Maria Ptqk states: "If it is true that the whole Earth is alive, it is time to re-engage with our many terrestrial companions"[17]. The territory and the relationships of dependency that constitute it are thus at the centre of the exhibition and its participants.

In creative activities that make use of the idea of territorial connections, there is an emphasis on the need to think in terms of cohabitation and coexistence, abandoning the hitherto dominant vision of separate, individual or generic existences that are hierarchically ordered. In the artistic strategies considered here, the idea is to develop non-anthropocentric critical thinking, to build a critical trans-species philosophy of existence and to strive for the establishment of a hybrid community, while also recognising and sustaining existing intergeneric differences.

A holobiontic perspective

Let us first look at the notion of the holobiont itself, to which I attribute the status of a nomadic category. However, unlike the wandering humanistic concepts indicated by Mieke Ball[18], which move across numerous disciplines but within the same domain, the holobiont in its journey leaves its parent domain, crossing boundaries between cross-domain disciplines and thereby acquiring a deepened and broadened transdisciplinary character.

As a biological category, the holobiont appears in considerations of the issue of coevolution, multidirectional mutual evolutionary influences resulting from the involvement of organisms in symbiosis. The term can be said to

16 M. Ptqk, *Science Friction for an interspecies encounter*, in: *Ciencia Fricción. Vida entre especies compañeras* [exhibition's catalogue], ed. M. Ptqk, CCCB, Barcelona 2021, p. 155.

17 https://www.cccb.org/en/exhibitions/file/science-friction/234907. [accessed 31.08.2025]

18 M. Bal, *Travelling Concepts in the Humanities. A Rough Guide*, University of Toronto Press, Toronto–Buffalo–London 2002.

potentially encompass all organisms involved in mutualistic symbiotic relationships and forming a kind of community. It was proposed by Adolf Meyer-Abich in 1943[19] and reused by Lynn Margulis in 1991[20]. Bruno Latour popularised it outside the biological sciences[21]. A holobiont is an assemblage of closely related species that have developed complex interactions with each other. Within it, we identify a host (usually a eukaryote) and many other species living in, on or around it, symbionts (such as archaeons, bacteria, fungi and viruses) that together form an ecological unit. Every complex organism is a holobiont, and social interactions can be recognised as associations of different beings.

It is believed that in a holobiont, which encompasses a host and its entire symbiont population, success depends on the success of all the parties involved in the interactions (mutualism)[22]. However, it has also been pointed out that host-microbe relationships cannot be reduced to relationships that are only positive for all parties. This is because they also include conflicts between the host and microorganisms, and antagonisms between the microorganisms themselves[23]. According to opponents of the holobiont theory, this category not only does not help but even hinders the study of relationships between interconnected organisms, as it diverts attention away from the aforementioned disharmonies or incompatibilities in terms of interests. However, contrary to such opinions, the holobiont concept does not necessarily presuppose only peaceful or beneficial interactions among all participants. Mutualism is for the holobiont a desirable state, but one that does not always occur.

Lynn Chiu and Scott F. Gilbert propose shifting the focus from the question: what kinds of individuals are holobionts, to the question: what kinds of

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19 A. Meyer-Abich, *Beiträge zur Theorie der Evolution der Organismen. I. Das typologische Grundgesetz und seine Folgerungen für Phylogenie und Entwicklungsphysiologie*, "Acta Biotheoretica" 1943, no. 7, pp. 1-80. See also J. Baedeker, A. Fábregas-Tejeda, A. Nieves Delgado, *The Holobiont Concept Before Margulis*, "Journal of Experimental Zoology. Part B: Molecular and Developmental Evolution" 2020, vol. 334, iss. 3, pp. 149-155. https://doi.org/10.1002/jez.b.22931.

20 L. Margulis, R. Fester, *Symbiosis as a source of evolutionary innovation: Speciation and morphogenesis*, MIT Press, Cambridge 1991.

21 See, for example, B. Latour, *After Lockdown. A Metamorphosis*, Polity Press, Cambridge 2021.

22 S. Asgari, *Chapter Ten - Epigenetic Modifications Underlying Symbiont-Host Interactions*, "Advances in Genetics" 2014, vol. 86, pp. 253-276.

23 A. E. Douglas, J. H. Werren, *Holes in the hologenome: why host-microbe symbioses are not holobionts*, "MBio" 2016, vol.7, iss. 2.

24 L. Chiu, S. F. Gilbert, *Niche construction and the transition to herbivory: Phenotype switching and the organization of new nutritional modes*, in: *Phenotypic Switching: Implications in Biology and Medicine*, eds. H. Levine, M. K. Jolly, P. Kulkarni and V. Nanjundiah, Academic Press, New York 2020, pp. 459-482.

processes create holobionts[24]. Such a thesis opens up the field to many types of holobionts whose construction may circulate from a canonical form, which has become an interesting challenge for art. Research on holobionts should aim to acquire a full understanding of their characteristics, both in mechanistic and holistic terms, by extending the holobiont concept to spatial-temporal scales of ecological organisation[25]. Indeed, the span of the spectrum of its forms extends from humans to the entire planet.

Humans are holobionts, and the number of microbial cells colonising their body is, it is widely believed, at least equal to, if not greater than, the number of human cells. The holobiont of the planet is Gaia. James Lovelock defines Gaia as a complex, self-regulating entity encompassing the Earth's biosphere, atmosphere, oceans and lands, which provide the planet with the ability to support life[26].

Human beings appear on this spectrum in a dual role: as the host of the human holobiont and as the biont of Gaia. If we treat the status of the first system as a primary mutualism (the initial relationship between the symbiont and the host, the human), then the second system becomes a secondary mutualism: that is, the incorporation of the primary mutualism into the secondary host, in this case, Gaia. This situation clarifies the nature of the human's responsibility towards nature and the consequences of his/her choices. The primary host (the human race) either becomes a Gaia symbiont or is lost[27].

The exhibition *Symbionts: Contemporary Artists and Biosphere* (MIT List Visual Art Center, 21.10.2022–26.02.2023, curators: Caroline A. Jones, Natalie Bell, Selby Nimrod, research assistance by Krista Alba) is presented by its creators as a presentation of a contemporary version of biological art (bioart). The exhibition commentary on the host institution's website states that the participating artists "explore what it means to be interdependent or collaborative, relinquishing individual human control over the artwork in recognition of our transhuman (more-than-human) relationships. *Symbionts* highlights the fact that the vast majority of genetic material in the 'human' body is not actually human, but considered 'other': bacteria, fungi and viruses. Similarly, the works in the exhibitions engage a biosphere dynamically modified by fungal growth, algal blooms and soil decomposition. Through experimental practices that blur

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25 R. Matyssek, U. Lüttge, *Gaia: The Planet Holobiont*, "Nova Acta Leopoldina" 2013, no. 391, pp. 325-344.

26 J. Lovelock, *Gaia. A New Look at Life on Earth*, Oxford University Press, Oxford 1979.

27 Cf. E. M. Wood-Charlson, *Marine symbioses: metazoans and microbes*, in: *Encyclopedia of biodiversity*, 2nd edition, ed. S.A. Levin, Academic, New York 2013, pp. 116-126; see also P. Srivastava, M. Sahgal, H. Dasila, *Microbial Symbiosis in Marine Ecosystem*, in: *Current Status of Marine Water Microbiology*, eds. R. Soni, D.C. Suyal, L. Morales-Oyervides, M. Fouillaud, Springer, Singapore 2023.

the boundaries between art and science, while highlighting the intersections of biological, social and economic systems, these artists reveal the critical interactions that give shape to our world and the interspecies entanglements that develop it"[28].

Caroline A. Jones, one of the curators of the exhibition, in a text published in the accompanying catalogue, points out that the concept of symbiosis – introduced into dictionaries in 1887 in the sense of 'with-living' – is treated in the *Symbionts* exhibition as a condition that is both biological and cultural, as a tool for critiquing individualism[29]. The art presented in the exhibition opposes the Anthropocene and all related orders (Plantationocene, Capitalocene, Chthulucene). Jones shows the formation of this attitude, referring, sometimes critically, to the ideas of William James, Jacob von Uexküll, Giorgio Agamben and E.O. Wilson. She demonstrates that a contemporary version of this concept is the current of artistic creation she describes as symbiotic art, widely presented in the exhibition, whose creators, such as Pierre Huyghe, are moving towards an art with multiple authorship that is addressed to a multi-genre audience[30]. This art also expects other exhibition strategies that do not isolate non-human forms of life, and that do not lock them into traditional schemes and devices. Symbiotic art is the work of symbiont artists, art 'in vivo' and 'in situ'.

Jones points out that the exhibited artists (such as Anicka Yi, Jenna Sutela and Candice Lin) consciously introduce the concept of the holobiont into their artistic discourses. The curator/researcher connects them to the SciArt tendency, confronting them with the bioart artists present in this trend, such as Joe Davis, Eduardo Kac, Steve Kurtz, Marta de Menezes and Paul Vanouse, as well as placing them in the context of the diverse art representing a turn towards nature, very active since the 1970s, that preceded bioart (Alan Sonfist, Agnes Denes, Mel Chin – to give just a few examples). In this way, the exhibition *Symbionts: Contemporary Artists and Biosphere* not only presents art emerging from contemporary post-Anthropocene discourses, but also places it in the broad context of the artistic practices that preceded and prepared it.

Works belonging to the *Symbionts* trend represent different types of art: sculpture, installation, video, assemblage and environmental art. In this context, a very special holobiontic form is taken by the performative work/project *Que le cheval vive en moi* (Let the horse live in me), by Marion Laval-Jeantet and Benoit Mangin, who work together under the name Art orienté objet

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28 https://listart.mit.edu/exhibitions/symbionts-contemporary-artists-biosphere [own translation]. [accessed 31.08.2025].

29 C. A. Jones, *Symbiontics: A Polemics for our Time*, in: *Symbionts: Contemporary Artists and the Biosphere*, eds. C. A. Jones, N. Bell, S. Nimrod, MIT Press, Cambridge Mass. 2022, pp. 13-21.

30 Ibid., p. 18.

(absent from *the Symbionts* exhibition, but Jones refers to them in her text). The project, which lasted around three years and included several months of preparations for the artist's blood transfusion, culminated in a performance in which the artist was transfused with selected fractions of horse blood. In order to achieve a particular fusion of the two organisms, Marion Laval-Jeantet was injected with cells and proteins, in particular, immunoglobulins. As a result, after the injection of horse blood elements, the artist herself reported: "I had the impression of being extra-human. I was not in my ordinary body. I was hyper--powerful, hypersensitive, hypernervous, very fearful, with the emotionality of an herbivore. I couldn't sleep. I had the feeling, a bit, that I was possibly a horse"[31].

The project realised by Art orienté objet shows that the concept of the holobiont has also inspired artists to create such hybrid trans-species forms, which classical holobiont theories have not yet taken into account. *Que le cheval vive en moi* is an extremely radical form of artistic discourse that embodies and makes visible in physical action the transgressiveness of post-humanist concepts.

Many of the artists who participated in the exhibition *Symbionts: Contemporary Artists and Biosphere*, such as Gilberto Esparza, Pierre Huyghe, Candice Lin, Nour Mobarak, Špela Petrič, Jenna Sutela, and Anicka Yi, not only create works that refer in their materiality and structure to the idea of the holobiont. Their works significantly involve non-human creatures as collaborators or co-creators of artistic projects. This tendency is of interest to me in the next section of these reflections.

Transhuman creation

The Helsinki Biennial (08.06-21.09.2025), taking place, as I write these words, under the title *Shelter: Below and Beyond, Becoming and Belonging*, directs attention to the relationship between humans and nonhumans. As the curators of this edition of the biennial, Blanca de la Torre and Kati Kivinen, write in the catalogue: "The displayed artworks give a focal role to animals, water, plants, insects, minerals and other nonhumans, exploring their significance and role in fostering the wellbeing of our shared planet"[32]. A significant number of the works are located not in gallery spaces, but in the public space of Esplanade Park, where people encountering the art can simultaneously

31 Quoted in L. J. Hilton, *The Horse in my Flesh: Transspecies Performance and Affective Athleticism*, "GLQ: A Journal of Lesbian and Gay Studies" 2013, vol. 19, no. 4, p. 488.

32 *2025 Helsinki Biennial. Shelter: Below and Beyond, Becoming and Belonging*, eds. S. Juntunen, S. Metsola, Helsinki Art Museum, Helsinki 2025, p. 36.

commune with vegetation, birds and insects (which also commune with the artefacts), and in the natural environment of Vallisaari Island, where the artworks are not only experienced in direct relation to the natural surroundings, but also enter into multiple, intentional relationships with them[33]. From among the diverse forms of trans-generational connections present in the works shown at the biennial, I will address here only those that focus attention on creative collaboration between human artists and non-human creatures (non-human artists). In these works, the relationship between people (artists) and non-human life forms is not limited to the subject matter, material or forms of presentation, but also the problems of creation.

The Band of Weeds collective (Olli Arni, Lauri Ainala, Kalle Hamm and Hermanni Keko) is presenting at the biennial (at Vallisaari) a sound installation titled *The Weep of Trees* (2021-2023), a work grounded in a set of data obtained from research on the response of trees to felling. The research was carried out in a cultured forest from which half of the trees had been felled, and looked directly at those that had been left alive. The research found that forest thinning induces a stress response in the trees left uncut. They were subjected to analysis before and after felling. The techniques used in the artistic research made it possible to record a drastic change in the electromagnetic field parameters of the ionised plant sap flowing in the tissues of the trees. These changing electromagnetic fields were then transformed into sounds audible to the human ear. Ultimately, the installation became a kind of mourning song of the trees. In their work, the artists challenged not only the cultural dominance of anthropocentrism but also the hegemony of the zoocentrism that follows it, reminding us of the presence of living and feeling plants in our environment.

Bug Rugs (2025) by Kalle Hamm and Dzamil Kamanger are four sculptures located in Esplanade Park, in the centre of Helsinki, which have been designed to act as hotels for insects. The artists invite insects, many of which are suffering today from changing living conditions and loss of natural habitats, to accept the sculptural forms they have created as their new homes. The sculptures, made of sustainable materials (wood, terracotta, locally collected organic materials), combine patterns referencing a traditional Finnish rya rug wool tapestry and a Kurdish kilim rug and build a transcultural narrative out of them[34]. However, given that these works were conceived to fulfil a hotel function, their artistic character is complemented and finalised by the insects that inhabit them. The final form of the work, if the invitation is accepted by the

33 The works presented in Esplanade Park also enter into various inter- or trans-generic relationships with their surroundings, but in their case the natural environment is immersed in and modified by the urban context that dominates there.

34 Ibid., p. 99.

insects, will be processual and performative, changing over time in a manner determined by the type of insects inhabiting them, and their numbers, form and habits. Both the works' functionality and aesthetics are co-created by the insects' decisions and performances.

Tamara Henderson's work *Worm Affair* (2023), like the previously referenced *The Weep of Trees*, belongs to sound art. Unlike that work, however, it is not grounded in a recording, but instead takes the form of a live performance. The artist uses media technology to make us listen to sounds produced in real time in a space that is not directly accessible to us. The physical spatial construction created by Henderson merely creates a framework allowing the sounds to be overheard.

In the case of Henderson's artwork, shared authorship is indicated directly: "More-than-human species are the co-creators of *Worm Affair* (...). The artist plunges us deep into compost by transmitting a live audio feed of compost worms transforming death and decay into rebirth and growth as they tunnel through decomposing organic matter. Their rhythmic munching and burbling digestion create a compelling soundscape that places us intimately inside a world below ground that is normally hidden from humans"[35].

The co-authorship of extra-human creatures is also explicitly indicated in the case of Kristiina Koskentola's work *Murder of Crows* (2021): "Crows are both the main protagonists and co-authors of Koskentola's video (...) Daily reality is intertwined with the otherworldly in this meditative tapestry of images, sound, speech, reciprocity, mythology, science and alchemy. Rounding out the display are the objects gifted to the artists by her bird friends"[36].

In her works, Koskentola assumes the role of a mediator, involving non-human partners in various forms of participation. Some other artists participating in Helsinki Biennial 2025 also work similarly, making creative use of the autonomous or provoked activity of non-human creatures: Jenni Laiti and Carl-Johan Utsi (*Teardrops of Our Grandmother*, 2023), Raimo Saarinen (*Invasive Scent*, 2025), Nomeda and Urbonas Gediminas (*Futurity Island*, 2018-2025) and Juan Zamora (*To Embody an Island*, 2025).

Polish artist Elvin Flamingo (Jarosław Czarnecki), who was absent from the Helsinki Biennial, works similarly. Beginning with his installation *Symbiosity of Creation* (2012-2032, first public presentation 2014), through *Plant ~ Animals* (2021), to *Reconstruction of Life* (2024-2025), a dominant current taking shape in his oeuvre expresses his conviction that art is created as a result of interaction between human and non-human creatures, and that in this kind of creative endeavour non-human creatures are beginning to play an

35 Ibid., p. 101.
36 Ibid., p. 113.

increasingly significant, if not pivotal role[37]. Many of these works by Flamingo were presented in his exhibition at the Laznia Centre for Contemporary Art in Gdansk[38].

Of particular importance to Flamingo's art is the *Symbiosity of Creation*. As its basis and framework, Flamingo built incubators, which he organised as dwelling places for several different species of ants, which he settled in them and provided with the necessities of life. From an artistic perspective, their behaviour became a performance performed 24/7.

The installation inhabits a place at the intersection of several artistic tendencies, including bioart, intermedia art, generative art and the performing arts. Having once considered this work in the context of research into new forms of imaging, I have already drawn attention to the discourse it undertakes on problems concerning creativity. At the time, I wrote that "The questions taken up by *Symbiosity of Creation* are part of the contemporary posthumanist debate which relates to, among other things, the issue of creativity in art: its course, nature, and, above all, its subjects. Czarnecki's [Flamingo's] installation problematises this issue – the artist turns the ants that he co-operates with while working on the installation into partners in the process of its creation. Agency in the process that includes the work, its course, conditions and consequences is split between the artist and the ants. The processes of creative interactions that occur in *Symbiosity of Creation* undergo naturalisation: they develop between the artist, the ants and their shared work"[39].

Flamingo, who began his artistic work as an experimental filmmaker, stated that the origin of the *Symbiosity of Creation* concept was his desire to create: "a 'film' that lives its own life, participating, interactive and symbiotic with me"[40]. Transferring these expectations of the artist with regard to film to the whole field of art, we should note that a work that realises such a scenario has two important properties.

Firstly, it is autonomous to some extent (*it lives its own life*), taking on a (usually) processual form whose properties, forms and processes of transformation are to some significant extent dependent on itself. In this type of work, the autonomy and character of the work can be linked to the active presence of non-human creatures within its fabric, their causal, centrifugal participation in its persistence (as in the case of *Worm Affair*) or be the result of external interactions between the human artefact and nonhuman agents (as in the case of *Bug Rugs*).

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37 See E. Flamingo, *Symbiosity of Creation*, Academy of Fine Arts, Gdańsk 2014.

38 *Elvin Flamingo Obsessive States*, Laznia Centre for Contemporary Art, Gdańsk, 07.02.2025 –30.03.2025.

39 R. W. Kluszczyński, *Visual Revolutions: From Electronic to Living Imagery*, "Art Inquiry" 2020, vol. XXII, p. 24.

40 E. Flamingo, *The symbiotic nature*..., p. 3.

Secondly, in spite of this autonomy, the work remains in an essential relationship with its human perpetrator and their creative choices and expectations (*it is symbiotic with the artist*). This is because the persistence of these works is treated as their life, which is autonomous yet also symbiotic with the artist. Autonomy is thus linked to a certain dependence. It is not total. Nonhuman creatures act autonomously within the work or in interaction with it, but within the conditions and possibilities set for them by the artist-human.

Does this mean that the nonhuman creatures within the artistic stance under discussion are creative subjects, participating in the processes that bring works of art into existence? Are these works of art the product of a joint human-nonhuman creation? What answers does the Helsinki Biennial give to these questions? Is it a widely shared or rather isolated position? What doubts might it raise? Can other solutions to this problem be proposed?

As far as the position of the Helsinki Biennial 2025 is concerned, the comments I referred to earlier in the catalogue about the individual works presented within its framework, as well as numerous other statements by the curators (for example, about Henderson's installation *Worm Affair* they write that the artist invited "other species to co-create with her"[41]) allow us to conclude that their answer to the question of the participation of nonhumans in the processes of creation is affirmative. This interpretation emerges not only from the proposed descriptions of the works presented in the Shelter exhibition themselves, but also from the conviction expressed by the authors of the concept of the biennial, a conviction rooted in posthumanist and postanthropocentric ideas, proclaiming "the critical importance of maintaining balance between nature and humans"[42] and heralding the emergence of "new post-anthropocentric subjectivities that recognize the interconnectedness of all life forms"[43]. The post-anthropocentric turn, together with the multispecies turn, which, according to de la Torre and Kivinen, "highlights the collaborative relationships that emerge between non-human and human entities"[44], together form, in their view, one of the most relevant paradigms for considering contemporary artistic practices. Within this paradigm, questions about creativity are also being asked anew.

Transdisciplinary creativity thus becomes, if not the most important, then one of the central issues addressed in the Helsinki Biennial 2025. This is explicitly stated in an excerpt from the curatorial text in the biennial catalogue. We read there that the fundamental challenge now is to create an understanding of art and creativity that would also allow nonhumans to be included in this

41 *2025 Helsinki Biennial...*, p. 39.
42 Ibid., p. 48.
43 Ibid., p. 42.
44 Ibid., p. 55.

field. The authors point out that "other-than-humans have developed their own forms of intelligence without copying humans"[45]; they emphasise their sensitivity, imagination, memory and engagement with the environment. However, their curatorial argument has less research value and greater postulative-ethical value. Blanca de la Torre and Kati Kivinen believe that confirming nonhumans' creative capacity will contribute to overcoming the anthropocentric paradigm. They write: "By granting non-humans the licence for aesthetic creation that is normally reserved for humans (...) the biennial challenges the instrumentalization of nature that has historically defined human interactions with the environment"[46]. And further: "Displacing the anthropocentric gaze, the biennial attempts to find a plurality of ways of sensing and mediating. This is a gesture of compassion, solidarity, empathy and recognition, exhorting humans to merge with nonhuman subjectivities"[47].

Limiting ourselves to only the ethical aspects of the issue of non-human creativity, however, will not allow us to come any closer to resolving this problematic issue or to coming up with possible hypotheses concerning it. Let us therefore look at different ways of viewing the place and functions of nonhumans in artistic practices.

In an earlier examination elsewhere of how the notion of creativity has transformed, I addressed the possibility of recognising media technology, and new media in particular, as subjects or agents of creation[48]. I recalled then, following Władysław Tatarkiewicz, that creativity was recognised as a human attribute as late as the nineteenth century and initially reserved only for artists. For centuries before that, it had been considered a divine attribute. In the twentieth century, it became specifically human, i.e., it was potentially applicable to all people, not just artists. Making new things made one creative[49]. The historicity, rather than the essentiality, of linking creativity exclusively to humans opens up the possibility of also linking it to other forms of existence, including both technological and living nonhuman forms.

If creativity is about creating new things, then the question of who is creative can take the form of: who creates new things? If we assume such a perspective, the possibility of including nonhuman living creatures within the circle of creative beings opens up not only to nonhuman living creatures but also to

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45 Ibid., p. 59.
46 Ibid.
47 Ibid., p. 60.
48 R.W. Kluszczyński, *Machines Like Gods. Introduction to Reflections on Creative Machines and the Art of Patrick Tresset*, in: *Human Traits. Patrick Tresset and the Art of Creative Machines*, ed. R. W. Kluszczyński, Laznia Centre for Contemporary Art, Gdańsk 2016, pp. 7-37.
49 W. Tatarkiewicz, *A History of Six Ideas: An Essay in Aesthetics*, Martinus Nijhoff / PWN, The Hague-Warsaw 1980, pp. 251-260.

certain forms of technology, especially advanced new media that are autonomous, such as AI. Many indisputable examples and arguments can be cited for new things being created within both of these environments. Creativity is thus an attribute not only of the human world but also of the more-than-human world. Does this also automatically mean granting entities belonging to the more-than-human world the ability to create art?

In this case, the matter is more complicated. In one of my earlier publications, where I addressed the relationship between artificial intelligence and art, I chose to assume that AI generators do not create art on their own (among the reasons for this decision, I pointed out their lack of intention to create art and their lack of metadiscursivity). They are, therefore, not autonomous subjects of artistic work. Instead, I considered AI as a new medium of art, whose fundamental properties are autonomy, technicality, digitality, automation, networking, grounding in databases, generativity, interactivity, virtuality, participation, hybridity, simulation and processivity. Assuming that every medium is a working environment, I concluded that the creation of artificial intelligence art is grounded in anthropo-technological collaboration[50].

One may think that I am thus forming a contradictory judgment, granting AI algorithms creative abilities while denying them the ability to create art. However, creating new things, which AI is capable of, does not have to imply the ability to create works of art. In the latter case, we define the creative process differently, attributing to it properties that AI does not possess. Objects created by AI can have the characteristics of works of art and can be treated as such. However, the path to their creation thus far requires the participation of an artist-human; it necessitates anthropotechnological collaboration (just as a work of art can become a product of nature – the surrealist l'objet trouvé – once it has been established in this role by an artist).

I am inclined to take a similar stance towards living nonhumans. Again, nonhumans create new things that, in the proper context, can be recognised as works of art. However, for this, they need human partnership.

Art is not part of nature, but of the human cultural world. Expecting nonhumans to create it, attributing to the inhabitants of the more-than-human world the need to undertake activities that are, in fact, only ennobling in the human world, can even be seen as a form of human post-colonial arrogance. The real need in this regard is for people to learn more about the nonhuman world, including through art, and to transmit this knowledge through aesthetic experience. To this end, artistic creation should move towards symbiotic practices grounded in artistic research. Human empathy towards nonhumans

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50 R. W. Kluszczyński, *Artificial Intelligence – A New Medium of Art*, in: *Unveiling Diverse Heritages of Otherness*, eds. P. Andrade et al., Springer Nature, New York-Singapore 2025.

can emerge from such artistic activities, supporting attempts to overcome anthropocentric culture. An excellent example of such a work, in my opinion, is the previously cited sound art installation, The Weep of Trees, by the Band of Weeds collective.

If we want to explore the possibility of treating living nonhumans and their activities as a new medium for artistic practices, the concept of biomedia, formulated by Eugene Thacker, seems to be a suitable starting point. Thacker conceives of biomedia as the technical recontextualisation of biological components and processes, adding that the conditions in which the process of recontextualising the biological domain is being developed and the technology for doing so are tightly interwoven. What makes the concept of biomedia particularly useful in the field of postanthropocentric art is the assumption that in biomedia, the biological body never stops being biological[51]. This is because it implies respect for the individuality of non-humans involved in artistic work and an emphasis on the actual symbiotic nature of the overall process. In biomedia, as Thacker goes on to write, the media employed and the technologies applied are organised in a way that prioritises the biological domain as a set of components in interaction with each other. The use of such technologies, media and techniques is geared explicitly towards enabling the biological domain to operate in novel contexts and articulated conditions[52].

Another valuable theoretical context for considering nonhuman art is the concept of symbiont art, based on the idea of symbiosis and the concept of the holobiont. I discussed this earlier here, using Elvin Flamingo's work and selected works presented at the exhibition *Symbionts: Contemporary Artists and Biosphere* as examples. An interesting reference for this model is Krzysztof Wodiczko's concept of participatory art realised in public space. In his artistic projects, he collaborates with a group of people whose experiences and stories become the subject matter of the works. These projects are primarily created not for the audience of the final eventperformance, but for these participants, allowing them to free themselves from trauma. Wodiczko does not treat his protagonists as co-authors of the work, but rather as his accomplices, emphasising that without them the project could not have been realised. Setting the welfare of the accomplices as the goal of the project and making its success dependent on their autonomous activity seems to create an excellent framework for conceptualising nonhuman art.

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51 E. Thacker, *Biomedia*, University of Minnesota Press, Minneapolis-London 2004, pp. 11-13.
52 Ibid., pp. 14-15.

Conclusions

The reflections on selected issues from the field of post-anthropocentric art and aesthetics I have undertaken here, along with my review and analysis of the selected works and exhibitions, lead to several important conclusions about recent artistic practices, their formal and media characteristics, and the issues they address.

First, contemporary art is increasingly engaging in ecological activities that challenge the dominance of the anthropocentric paradigm, and a non-anthropocentric perspective is becoming more prevalent among an increasing number of artists.

Second, the works created in this trend take on a transdisciplinary form and design format. They become different forms of artistic research, carried out collaboratively and in dialogue with science.

Third, the categories of Anthropocene, territory, holobiont and transdisciplinary creativity, discussed here in separate sections, are aspects of the same problem and all constitute part of a common general trend in art. However, different aspects become apparent within the different strands, and the emphasis may shift to different priorities. Proximity, interconnectedness, empathy and a sense of community practice, combined in a post-anthropocentric approach, reflect artists' responses to the challenges of the Anthropocene.

Fourth, many contemporary works that engage in post-anthropocentric discourse draw on new media, particularly digital technologies, using them for a variety of purposes. Sometimes, they do so in order to make visible or explore existential relationships between different species. Other times, they do so to draw attention to the presence in our surroundings of creatures that are invisible to us daily or to bring out their unfamiliar faces or characteristics. Sometimes, it is necessary to draw attention to processes that integrate nature and technology into new, hybrid entities.

Five, post-anthropocentric art shapes new artistic strategies and deconstructs traditional aesthetic concepts, such as the concept of the work of art and, in particular, the notion of creativity. The concept of post-anthropocentric creativity refers to collective and symbiotic practices, modelling a pattern of collaboration between humans and nonhumans, in which the former take responsibility for the entire creative process and, above all, its consequences.

Among the works that refer to hybrid ideas and holobiont concepts, we can also find some in which living organisms and mechanical and digital entities are brought into close, direct relations. Examples of the latter include several works emerging from the activities of the SymbioticA laboratory, in particular the bio-robotic installations initiated and realised by Guy Ben-Ary, with the support of artistic and scientific teams established for this purpose.

These works include *MEART – Semi-Living Artist* (2001-2006), *Silent Barrage* (2009-2012) and *CellF* (2015). Generically defined using the category hybrot (hybrid robot), they represent one of the most important contemporary transdisciplinary varieties of intermedia art[53].

Since the living components of these works were created in a laboratory by the artist and his team, and then kept alive in the gallery, it is worth recalling here the precursors of the use of cell culture as an essential component of the creative and exhibition process. At the very beginning of the twenty-first century, Oron Catts and Ionat Zurr pioneered the strategy of presenting cultured artefacts in exhibitions, which they called *semi-living* sculptures, constructed from living, multiplying cells that are kept alive in a laboratory for the duration of the exhibition. Through their work, the art gallery became a laboratory at the same time. The works of Catts and Zurr are *artistic research*, and an important field of their research interest is the notion and issue of life in the age of synthetic biology. I have found their aesthetics to be the result of a combination of reason and care[54].

Today, artificial, generative neural networks are increasingly being introduced into the relationship between living elements (wetware) and technical components (hardware and software). Steve M. Potter, a long-time collaborator in Ben-Ary projects, writes about this, citing the aforementioned *MEART* biorobotic installation[55]. By inscribing artificial intelligence in a field of creativity that rejects an anthropocentric perspective, these practices highlight hitherto unknown aspects of the links between artistic, technological, scientific and philosophical discourses, and also initiate a new kind of ethical consideration. Related to post-anthropocentric projects, the perspective of empathy finds new fields of exploration and new challenges in works of this kind.

Art is reaching further and further. It offers a different kind of sensibility. It supplements a rational approach with empathy. It proposes a comprehensive, holistic view of the world. It expects from its audience – and especially from researchers – new ways of experiencing it and developing new languages for its analysis and interpretation.

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53 See: R. W. Kluszczyński, *Hybrot art – Intermedia Creative Practices in the Postbiological Era*, in: *Guy Ben-Ary: Nervoplastica. Bio-robotic Art and its Cultural Contexts*, ed. R. W. Kluszczyński, Laznia Centre for Contemporary Art, Gdańsk 2015, pp. 168-243.

54 R. W. Kluszczyński, *The Aesthetics of Reason and Care*, in: *Crude Life: The Tissue Culture & Art Project. Oron Catts and Ionat Zurr*, ed. R. W. Kluszczyński, Laznia Centre for Contemporary Art, Gdańsk 2012, pp. 72-91.

55 See: S. M. Potter, *What Can AI Get from Neuroscience*, in: *50 Years of AI*, eds. M. Lungarella et al., Springer-Verlag, Berlin-Heidelberg 2007, pp. 174-185.

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SZTUKA POSTANTROPOCENTRYZMU: KONCEPCJE, WYZWANIA, DYLEMATY (streszczenie)

Posthumanizm i postantropocentryzm znacząco wpłynęły na najważniejsze aspekty paradygmatu sztuki, przekształcając koncepcję twórczości artystycznej i tworząc nowe wyzwania dla jej odbiorców. Proponując odmienne niż w tradycyjnym systemie humanistycznym reguły rządzące relacjami między ludźmi a bytami nie-ludzkimi, prowadzą do ukształtowania się nowych koncepcji sprawczości twórczej, przeobrażenia natury i statusu dzieła sztuki, a także zmian w charakterystyce jego odbioru. Estetyka i teoria sztuki, które od połowy XX wieku przeszły liczne wstrząsy, wystawione są tym samym na nowe wyzwania. W niniejszym artykule przyglądam się wybranym procesom z tego obszaru i rozważam niektóre koncepcje teoretyczne oraz wyrosłe z nich praktyki artystyczne, które miały znaczący wpływ na kształtowanie się nowej sytuacji w polu sztuki. W szczególności analizuję zagadnienia antropocenu, terytorium, holobiontu i twórczości transgenicznej, koncentrując się na kilku wystawach prezentowanych w ostatnich latach, które poruszają wskazane kwestie i prezentują związane z nimi trendy w sztuce, a także przywołując i analizując wybrane prace z tej dziedziny.

Słowa kluczowe: antropocen, sztuka ekologiczna, holobiont, postantropocentryzm, sztuka symbiontyczna, terytorium, sztuka transdyscyplinarna, twórczość nie-ludzka.

Ryszard W. Kluszczyński, PhD, Professor of Cultural and Art Studies. At the University of Łódź, he works at the Department of New Media and Digital Culture. Director of the Transdisciplinary Centre for Artistic and Scientific Research at the University of Łódź. Professor at the Academy of Fine Arts in Łódź. In his works, he deals with the issues of new media art and cyberculture, as well as art theory and its latest trends, with a special focus on the problems of the relationship between art, science, technology and politics. Author or co-author of numerous books. Curator of multiple international exhibitions and art projects. Between 1990 and 2001, he was the Chief Curator of Film, Video and Multimedia Arts at the Centre for Contemporary Art, Ujazdowski Castle in Warsaw. Curator of the International Biennale of Contemporary Art Mediation, Poznań 2009–2010. From 2010 to 2024, artistic director of the international programme Art+Science Meeting at Laznia Centre for Contemporary Art, Gdańsk.