Art Inquiry. Recherches sur les arts 2017, vol. XIX
ISSN 1641-9278 / e - ISSN 2451-0327 / DOI:10.26485/AI/2017/19/4

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AVANT-GARDE AGAINST AVANT-GARDE

Abstract: In this paper, new media art, which is fundamentally associated with technology and science, will be discussed as a contemporary form of artistic avant-garde. In my argument, I will focus on its connections to earlier manifestations of avant-garde mindsets and attitudes, that is, to historical avant-garde and neo-avant-garde. I will also address the role of the art world and its institutions in establishing their mutual relationships.

Keywords: avant-garde, new media art, art & science, cybernetic art, robotic art, bioart, hybrot art.

The rise of avant-garde tendencies, which marked the beginning of the 20th century, profoundly transformed traditional artistic orders. The most radical changes triggered by avant-garde movements challenged the entire aesthetic system which was grounded on an explicitly defined artist-work-viewer configuration and integrated by equally precisely described creative and receptive processes. Avant-garde revolutions questioned this system as a whole (disturbing and dismantling its inner relations) as well as its individual components (problematizing and undermining all of its elements). Within avant-garde practices, the work as an original product of an artist's own effort was replaced by a ready-made object of his/her choice (as in Marcel Duchamp's readymades), a creation of nature (as in Surrealists' *l'objet trouvé*), or an artefact commissioned to be made by others (as in Laszlo Moholy-Nagy's telephone paintings). Employing such strategies, the avant-garde artists abandoned the imperative of making works-artefacts and became, instead, initiators of artistic ideas. In the art-making process, coincidence and chance came to replace technical skills and creative decision-making, which undercut the relevance of artistic identity and the role of *techne*. At the same time, viewers more and more frequently realized that they decisively contributed to the very emergence or the particular shape of the artworks they experienced. Still, both in the period of the historical avant-gardes, which thrived with particular intensity in the interwar period, and in the times of neo-avant-garde, which germinated in the late 1950s and withered at the point we are still unsuccessfully trying to agree

on, those changes neither transcended nor undermined the humanistic paradigm. Whatever form it took, art was consistently perceived as a human creation, and creativity was recognized as a distinct attribute of the human species. The inner tension, which disrupted the notion of art and its system, arose and was identified within this paradigm. This tension tended to manifest itself in the conflict between the set of concepts and phenomena forming the field of new, anti-traditionalist, and innovative art, on the one hand, and the field of anti-art, which deconstructed both traditional artistic beliefs and the pursuits of new art. As an artistic and social development, the avant-garde emerged from this inner conflict and searched for its identity in transcending it.

Of course, Duchamp's gesture, which I consider to be the founding act of the entire avant-garde paradigm, had deeper implications. His idea of the artwork as a readymade crucially posits that the artwork and, likewise, art as such and its concept are socially constituted. Given this, Duchamp can be viewed as clearing the path for radical constructivism and, consequently, opening up the field in which his concept could be applied beyond the confines of artistic practice. This was, nevertheless, only an indirect feat. A direct effect of Duchamp's work was only paving the way to an institutional concept of art. Duchamp's paradigm as an avant-garde paradigm established its boundaries as charting the space of the self-constituted art and remained enclosed within these boundaries. As a result, the energy was all spent on self-analysis. Art that recognizes and constitutes itself as art in transgression makes up the field of the avant-garde. And despite all their alterity and differences, I believe that this is true about both manifestations of the avant-garde: historical avant-garde and neo-avant-garde. In this model, the avant--garde paradigm has two distinct properties: the humanistic investment (anthropocentrism) and autotelic self-constitution.

This, however, changes with the onset of new media art and its chronologically first variety, that is, cybernetic art. In cybernetic art, non-humanistic parameters of artworks began to prevail in terms of both of their sources – artistic agents – and their other features. The inner avant-garde aporia as described above (new art versus anti-art) developed robustly in new media art, expanding eventually into a comprehensive complex, or network, of conflicting interrelations that stretched beyond the field of art. Nevertheless, also in new media art, the newly proposed order of art is forged in the attempts to use tensions and conflicts artistically, the only difference being that these attempts take altered forms.

Cybernetics produced a space for meaningful interactions between artistic pursuits and scientific practice – interactions developing in the context of technology (which was to develop into an environment shaped by the interplay of digital information, telecommunications, and robotic technologies). Cybernetic ideas came to be an axis for the model of artistic practice in which the arts, science, and engineering made up a system of mutual interrelations.

The development of cybernetic art was another powerful challenge to aesthetics and theory of art. Cybernetic artworks were recognized as autonomous agents, with the sources of their activity located within their own structure. Responding to the stimuli from their environments, the artefacts created by cybernetic artists engaged in performative actions both in galleries and in public spaces. In this way, the artefacts, which had boasted a stable inner organization before, mutated into events and processes. As such, they followed kinetic art in joining the category of time-based arts. More than that, the artworks behaved in unpredictable ways as they responded in real time to equally unpredictable incidents and occurrences around them. Thereby, they questioned the idea of representation specific to visual arts, ultimately abandoning it to embrace the concept of self-presentation.

The autonomy of cybernetic artworks is, of course, technical and not mental. Giving up on representation for the sake of self-presentation, cybernetic art has put a robotic perspective in place of the anthropocentric one. As it made the robot the model of an artwork, cybernetic art adopted the idea and took on the task of making life rather than presenting it. Naturally, what we encounter here is a vision of post-biological life, which entails reconsidering the humanistic standpoint, and – further – including cybernetic art in the process of building trans-humanistic orders. It means also crossing the boundaries of arts towards the technological and scientific environment, and discarding the traditional avant-garde self-interest of art for the sake of exploring transdisciplinary frameworks and hallmarks. Thus, both distinct properties of the avant-garde paradigm evoked above – anthropocentrism and autotelicity – were fundamentally questioned in cybernetic art. And this was just the beginning of a new revolution which, engulfing art, was by no means limited to art.

A direct extension, or, perhaps, transformation of cybernetic art is to be found in robotic art. The continuity, if not mutual interpenetration, of cybernetic and robotic art is strongly corroborated by their respective histories,[1] in which multiple pieces are recurrently ascribed to either of them, starting from such pioneering works as *CYSP 1* by Nicolas Schöffer and *Senster* by Edward Ihnatowicz. This attests that the boundaries between the two fields are fluid and permeable, and some works easily fit into both artistic orders. Rather than being torn by mutual frictions, the two movements are united in being conflicted with academic and museum art, including also numerous parallel neo-avant-garde currents.

Importantly, cybernetic and robotic art constructed its identity upon its opposition to traditional art. Edward Ihnatowicz' artistic biography shows this with particular clarity, and the history of reception of Nicolas Schöffer's art is

1 See, e.g. Eduardo Kac, "Robotic Art Chronology," *Convergence* 7, no 1, Spring 2001; Edward A. Shanken, "Cybernetics and Art: Cultural Convergence in the 1960s," in *From Energy to Information*, eds. Bruce Clarke and Linda Dalrymple Henderson, Stanford University Press, Palo Alto 2002.

only a further testimony to it. Ihnatowicz began to derive satisfaction from his artistic practice only when he found a way to combine it with engineering work. And his crowning artwork Senster was briefly exhibited at a technical museum only to be soon disassembled and destroyed. Senster became part of art history when the artwork was actually no more.

At the same time, new media art started to develop in an enforced separation from the art currents traditionally defined as avant-garde. This split has persisted till the present day. New media art consistently develops and circulates in a separate circuit, is funded by different institutions, and is relegated by the art world to its peripheries.

The institutional separation of new media art, which gravitates towards technology and science, from art labelled as avant-garde is crucial to my argument. Cybernetic art and its new-media continuations have for some time now developed alongside neo-avant-garde art, an heir to historical avant-gardes. Yet, since the very beginning, the two fields, though parallel, have been disjoined. Both species of the classic avant-garde have slowly succumbed to museification, which seems quite extraordinary given their prior revolutionary character. Pop art, Minimalism, and Conceptualism, together with Constructivism, Futurism, and Surrealism, all started to meander their way into in museum collections. The process was, of course, prolonged and did not happen overnight, yet it has proved unstoppable. Museums became receptive to avant-garde currents, dismissing only selected, particular expressions of avant-garde art. Avant-garde art was inexorably becoming museum art.

This resulted in a peculiar situation. Namely, the historical avant-garde movements, while retaining their status and descriptions, gradually ceased to be avant--gardes in the functional sense of the term, within the actually practiced models of art-making. Their original position was taken by new media art, which unfolded and functioned in ways specific to erstwhile avant-garde movements. However, new media arts – and in particular those of their disciplines which most firmly and uncompromisingly engaged not only with technology but also with science – failed, as a rule, to be acknowledged as new forms of artistic avant-garde even though, given their functions, they were undoubtedly embodiments of the avant--garde. New media arts boasted all the properties attributed earlier to the avant--garde standpoint. Nevertheless, instead of recognizing them as new, current, radically future-oriented variants of artistic avant-garde, the art world seized every occasion to proclaim the end of the avant-garde (prematurely, as it transpired later, even in academic terms), and announced the reign of postmodern art regarded as anti-avant-garde. Thus, the actual avant-garde of the day, that is, new media art, found itself forced into conflict with the historical avant-gardes and excluded from the institutionally defined field of the avant-garde, because – perhaps paradoxically – the avant-garde as such became a paradigm which was appointed and legitimized by the art establishment.

As time went by, new media arts have advanced, transformed, and consolidated their avant-garde character. Cybernetic art should in fact be appreciated for its pioneering effort not just in spawning robotic art, but also in fostering other developments in the field, such as algorithmic art, generative art, artificial ecosystem art, artificial life and artificial intelligence art, bioart, neuroart, and biorobotic art. Cybernetic art effected a breakthrough in the order of contemporary art, initiating or boosting the development of its most radical disciplines,[2] which are essentially involved in the transformations our world is undergoing today. Let us now look into examples of various continuations of cybernetic art, i.e., of contemporary avant-garde.

The varied group of robotic artists who follow in the footsteps of Schöffer and Ihnatowicz includes Louis-Philippe Demers, Ken Feingold, Chick MacMurtrie, Simon Penny, Ken Rinaldo, and Stelarc. Among them, Bill Vorn and his work take a very special position. Besides physically interacting with the audience, Vorn's robots also initiate meaningful emotional and cognitive relationships. Their hybrid status, which combines properties of living organisms (behaviors) and technical devices (appearance), triggers in the viewers correspondingly confused and structurally ambivalent reactions, in which affects are intertwined with cognitive interests, and empathy merges with primal fear and intersects with technophobia. Ideas of artificial life lie at the core of Vorn's explorations, with robotics helping the Canadian artist to develop his research. However, it is not artificial life as such that is his primary area of artistic inquiries. In fact, he is far more preoccupied with human attitudes to intelligent machines, robots, and, especially, artificial life forms. These interests breed multiple questions: What is it that defines life? What does it mean to be human? Can a machine have a life? What is artificial life? Vorn designs his art so as to make knowledge processes part of its aesthetic experience. The viewers discover their readiness (or a lack thereof) to accept the post-human, post-animal, and non-humanistic vision of life and intelligence, and subsequently, return to the world of culturally informed, social beliefs about them. An encounter with Vorn's works helps the viewers to compare the acquired and internalized cognitive patterns concerning life and intelligence with the individual sensations induced by the behaviors of the robotic works they witness. In the next step, this can provoke a confrontational clash between these patterns and sensations, extended by reflective examination of the entire experience. The analysis includes also emotions, which make up an important part of this experience. If the viewers remember that they have mirror neurons, they can easier understand why they recognize emotional aspects in the robots' activities, which does not abolish the

2 Cf. María Fernández, "'Life-Like': Historicizing Process and Responsiveness in Digital Art," in *A Companion to Contemporary Art since 1945*, ed. Amelia Jones, Blackwell Publishing, Oxford 2006, pp. 557-581; Ryszard W. Kluszczyński, "Paradygmat sztuk nowych mediów," *Kwartalnik Filmowy*, no 85, Spring 2014, pp. 194-205.

fact that they do find and feel these aspects. This is one reason why Vorn carefully builds spectacle into all his pieces in order to impress and amaze the viewers and, perhaps, encourage them to engage in reflection.[3]

The viewers' experiences of Ken Feingold's animatronic sculptures are initiated and shaped in quite similar ways. Feingold, too, tackles the issues of artificial life (artificial intelligence in particular) and invites us to reflect first of all on ourselves: on human life and intelligence, on their transformations and transgressions. Consequently, we are not surprised that Feingold also finds theatricality essential to his projects and makes sure that they stimulate and engage his audiences. Feingold's robotic art involves the viewers in multiple kinds of activity: physical, intellectual, affective, and imaginative. His works aim also to stimulate emotions and not always fully conscious behaviors. Stretched between direct participation and distanced reflection, this art addresses such issues as trans-species relationships, unbridgeable alterity of beings, enigmas of consciousness, and illusory identities, in this way making the viewers face the central challenges of today's world.[4]

If the movements discussed above are interested in artificial life and programmed intelligence, biotechnological art (aka bioart) is preoccupied with lab-grown life and induced intelligence. While the former develop in the space determined only by physical machinery (hardware) and algorithmic codes (software), the latter rely also on biological life-forms (wetware). In such ventures, engineering and IT have found support in synthetic biology, and genetics and tissue cultures have become artistic strategies. If I were to name one pioneer of this kind of art, I would think of Edward Steichen, who put a piece consisting of hybrid delphiniums he had grown and modified on display at New York's Museum of Modern Art in 1936. Still, it took several dozen years for the development of bioart to really gather momentum as this discipline grew in relevance only in the 1980s. It was then that artists, such as Dennis Ashbaugh, Kevin Clarke, Ronald Jones, and Larry Miller, began to integrate traditional arts materials and techniques with the living matter and genetic technologies in order to piece together hybrid artefacts. In 1985, Joe Davis showed his *Microvenus*, which initiated art of living transgenic artworks made with the tools and techniques of molecular biology. Davis was soon joined by other artists: Eduardo Kac, Marta de Menezes, Paul Vanouse, and their likes. In further development, the two varieties of genetic art increasingly tended to merge into one trend in which biological techniques were coupled with IT, genetic, and artistic techniques. This tendency is the domain of, for example, Beatriz da Costa and Anna Dumitriu.

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3 See, Dominique Moulon, "Interview with Bill Vorn," in *Robotic Art and Culture: Bill Vorn and His Hysterical Machines*, ed. Ryszard W. Kluszczyński, CSW, Gdańsk 2014, pp. 52-73.

4 For more information about Feingold's art, see. Ryszard W. Kluszczyński, ed., *Ken Feingold: Figures of Speech*, CSW, Gdańsk 2014.

Aesthetic, cognitive, and critical strategies go into the making of bioart works, which tend to address issues emerging as a result of biotechnological advance ments. At the same time, the artworks assimilate strategies characteristic of participatory culture and makers' culture into specialized science, contributing in this way to the development of the transdisciplinary paradigm. Besides revolutionary aesthetic implications, bioartists' practices and projects encourage exploring the interpenetrations of material life and digital virtuality, the programming of life, and the consequences of this process.

Besides genetic (or transgenic) art, the other kind of bioart is art of tissue cultures prominently represented by Oron Catts and Ionat Zurr, founders of the Tissue Culture and Art Project. Their work centers, first of all, on the material aspects of life, on cells and their multiplication, on the substratum, and the ways in which it conditions life. Catts and Zurr develop their projects using living tissue cultures. The artists create semi-living sculptures – objects which exist only thanks to life-support apparatuses in laboratories arranged within galleries. Designed in this way, their works serve to explore life, its understandings and definitions, limits and forms, identity, transgression, exploitation, and life politics.

Similarly to what cybernetic and robotic art did earlier and in a different context, Oron Catts and Ionat Zurr's art breaks with the traditional idea of representation central to Western visual culture, and replaces it with a specific concept of presence. In their works, the artists seek not so much to present life as to create it. The media used by Catts and Zurr are referred to as wet or biological. Practices that develop in and through these media result in forming living or half-living entities. In these pursuits, life is the object of both creation and reflection. At the same time, however, since this life is constructed in laboratory settings, reflection and discussion focus also on the relationships of nature and culture as well as on the philosophical issues involved in creation of life and living beings. In the context of the such bioartistic ventures, the artist's studio inevitably mutates into a research laboratory, artistic tools into scientific paraphernalia, and artefacts into tissue cultures. In this way, in Catts and Zurr's work, the traditional artistic sphere inexorably comes to be rife with ethical dilemmas.

The interactions of biological art involving tissue cultures and engineering with computer and robotic art bring forth bio-robotic art. Bio-robotic art is compellingly exemplified in the work of Guy Ben-Ary. I refer to his practices as *hybrot art*, for his pieces are hybrids combining living neuronal networks and robotic technologies.[5] His most interesting artworks exhibit a capacity of engaging autono-

5 Cf. Steve M. Potter, et al, "Hybrots: Hybrids of Living Neurons and Robots for Studying Neural Computation," Brain Inspired Cognitive Systems, August 29 – September 1, 2004, University of Stirling, Scotland, UK, accessed July 17, 2017. https://pdfs.semanticscholar.org/1480/3b9ab634aa80b5c36db18a6e2d62560863f4.pdf?_ga=2.44028268.839279730.1500497104-1562118606.1500497104.

mously with art-making. For instance, *MEART - The Semi-Living Artist* (2002) was built of two basic, interconnected segments: a neuronal culture and a robot. When a signal from the camera (i.e., eyes) reaches the neuronal culture (i.e., the brain) via the Internet (i.e., the nervous system), the signal is processed and transmitted to the robot (i.e., arms), which starts drawing. Another work by Ben-Ary, *CellF* (2016), is a hybrot of an artificial musician making improvised music in response to sounds (music) from the outside. Both these pieces (like the *Silent Barrage* installation of 2006) feature an autonomous creative agent, performing actions independent of any prior computer programming.

CellF brings one more aspect into our argument. In designing and implementing this project, Ben-Ary relied on a technology called Induced Pluripotent Stem Cells (iPSC, for developing which Shinya Yamanaka and John Gurdon won the Nobel Prize in 2012). The technology made it possible to grow the piece's neurons – the brain of *cellF* – from skin cells sampled from Ben-Ary's arm, re-programmed into stem cells, and, finally, converted into neuronal cells. As such, the neuronal culture that operates Ben-Ary's work can be regarded as a *sui generis* extension of his own brain.

The biotechnological and bio-robotic artistic ideas described above generated, for the audience, a hybrid experience fraught with inner tensions, in which aesthetic and emotional reactions merge with cognitive and existential responses, and with philosophical and ethical considerations.[6] They all revolve around the issues of calling living beings into existence, their autonomy, and intelligence. As explored by Guy Ben-Ary, these issues are additionally interwoven with questions of creativity. His works described above are agents of artistic activities and subjects of unique, hybrid, biological-computer-robotic processes in which artworks of the next generation are produced. The same issues were also probed earlier, albeit in a different perspective, by algorithmic art, which is continued in generative and evolutionary artistic practices. In algorithmic art, the work on computer graphics and animations united scientists (such as Frieder Nake, Georg Nees, and A. Michael Noll) and artists (such as Manfred Mohr, Vera Molnar, and Lilian F. Schwartz). All of them realized how much digital technologies contributed to their creative pursuits. They knew also that each computer artwork was generated by digital technology. As a result of this awareness, two subdisciplines were subsequently distinguished within computer art: generative art and evolutionary art, in which artists, including Sonia Landy Sheridan, Ernest Edmonds, Herbert Franke, William Latham, and Karl Sims, deliberately underscored the creative dimension of digital tools. As early as in the 1970s, Harold Cohen presented a computer program

6 Elsewhere, I labelled the art of Oron Catts and Ionat Zurr as the aesthetics of reason and care; see Ryszard W. Kluszczyński, "The Aesthetics of Reason and Care," in *Crude Life: The Tissue Culture & Art Project. Oron Catts & Ionat Zurr*, ed. Ryszard W. Kluszczyński, CSW, Gdańsk 2012, pp. 72-91.

called Aaron, which made original drawings and paintings all by itself. Currently, this line of work and inquiry is continued by Patrick Tresset and his robots named Paul, which rely on interactivity for generating artworks. Paul, namely, draws portraits from life. Importantly, generative art, which was initially identified with algorithmic art (computer-generated, algorithmically determined works), was recognized as a separate field when it was noticed that generative system can be not only digital, but also chemical, biological, or robotic, for that matter. This is why Guy Ben-Ary's bio-robotic works can be said to derive, on the one hand, from evolving bioart and, on the other, from algorithmic and generative art. Both tendencies intersect in Ben-Ary's projects, producing one of the most radical forms of contemporary hybrid art.

In the collection of the artistic developments discussed in this paper, Stelarc's art is an especially significant phenomenon, as almost all kinds of artistic practices addressed above converge in his work. Among his signature pieces, Stelarc has exhibited *Walking Head* (2006), an autonomous robotic sculpture anchored in cybernetics; biotechnological *Ear on Arm* (2006), i.e. an additional ear implanted in the artist's forearm; *Prosthetic Head* (2003) as a form of artificial intelligence; and a series of performances dating back to the early 1980s, in which he integrates his own body with various technologies (an exoskeleton, a prosthetic arm, monitoring technologies, etc.), enacting the directly experienced concept of artist-cyborg and cyborg art. Stelarc believes that today's cyborg is a network connecting human bodies and minds with technological ties. These couplings affect what the body is and how it functions – the body which Stelarc, in any case, considers obsolete and unadjusted to the demands of the man-made environment. In his performances, he gives over the control of his body to internauts, at the same time perfectly controlling the prostheses he uses. In this way, he problematizes all distinctions and definitions, strips the body of identity, and obliterates the boundaries between its biological and technological aspects. In effect, the evolving body ceases to be an interface and a tool of communication between remote beings or environments, and becomes a hybrid form.[7] No longer external to the body, technology is revealed as the body's extension and, therefore, its property – an aspect of its liquid, elusive identity. Though achieved by other means, this outcome is similar to what the practitioners of bioart, generative art, and bio-robotic art (bred by cybernetic artistic practices) accomplish in pursuing hybridization and deconstruction of boundaries. Giving his body a post-organic form, Stelarc uses it as a tool of post-biological art, which in his rendering engages in an interesting dialogue with Ray Kurzweil's concept of Singularity.[8]

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7 Annick Bureaud, "Stelarc: le bourdonnement de l'hybride," *Art Press*, no. 207 (November 1995).

8 For more information on Stelarc's art, see *Meat, Metal, and Code: Contestable Chimeras. Stelarc*, ed. Ryszard. W. Kluszczyński, CSW, Gdańsk 2014.

All the currents of contemporary new media art evoked above develop in numerous complex interactions with science, imbue the languages of art with a new quality, and give a new character to their artworks. These languages converge into an aesthetics ridden with tensions and aporias, a transdisciplinary aesthetics in which migration is a constant status subject to ongoing transformations – permanent in mutability and transgression. Artworks, in turn, are re-cast as unique philosophical machines: devices serving to initiate and sustain cognitive discourses, critical and ethical at the same time, as well as to engage in reflection on the condition of the post-biological world. The conflicts inscribed in such works of art – oppositions between the living and the objective, the natural and the cultural, the real and the virtual – are still encoded in culture as irresolvable. Art in dialogue with science seeks, like science, though in different ways and for different reasons, to abolish this irresolvability and bring together disjunctive states in order to put various consequences of such events to an analytical test. Among the events covered by such analysis, special attention is showered on the transformations of the human species, its status, and evolutionary changes unfolding, for a considerable time now, in a new context: in the bio-techno-info-sphere. Because of this new context, the horizon of these transformations ever more clearly takes the form of a post-human world.

New media art, and in particular its currently most radical movement of art@science, is the real contemporary avant-garde. Yet, the art world has framed it as an opposition to the developments which, despite their historical character, have still retained the nominal status of the avant-garde. This has produced a paradoxical situation in which the current avant-garde has been maneuvered into conflict with the historical avant-gardes. Nevertheless, if we assume that, rather than designating a set of conventions, principles, and, even less, stylistic patterns, avant-garde means simply different art, a position always radically confronting concurrent mainstream art, we will easily perceive that art@science is not a reverse but a continuation of historical avant-gardes – their extension in the recent changing cultural context.

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AWANGARDA PRZECIW AWANGARDZIE (streszczenie)

W podjętych tu rozważaniach sztuka nowych mediów, pozostająca w istotnych relacjach z technologią i nauką, prezentowana jest jako współczesna postać awangardy artystycznej. Przedmiotem rozważań staje się jej relacja z wcześniejszymi manifestacjami postawy awangardowej: awangardą historyczną i neoawangardy oraz rola, jaką w ustanowieniu ich wzajemnych relacji odgrywa art world i jego instytucje.

Słowa kluczowe: awangarda, sztuka nowych mediów, art & science, sztuka cybernetyczna, sztuka robotyczna, bioart, hybrot art.