

Between Bio(s) and Art

Intensities of Matter in Bioart

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The particular presence in art of the body in all its various forms, highly connected to the notion of its representation, began in the latter half of the 20th century. Unfettered naked bodies, all kinds of bodily textures and fluids in installations, performances and videos or photographs were to test the boundaries of the body – of the self. Called »carnal«¹, such art seemed to follow the phenomenological attempt to invest the body with a reliable cognitive power.²

Today, although carnal art still has its place in the most prestigious galleries and museums and the body is one of the most popular subjects of numerous academic publications, artists have begun to search for new forms of expression concerning the meaning of the body, beyond the body itself. Why am I then writing about art that goes beyond the body in an article that is supposed to delineate the notion of the body?

In order to understand the contemporary phenomenon of the art in question, Gilles Deleuze's and Félix Guattari's notion of the body as an unfixed, non-unified system may not only seem to give a valuable insight, but also gains a new actuality when confronted with these art forms. As a body that is without organs, in other words, without a hierarchical organisation, it is beyond the ontological distinction between beings. This means that to think about the body is to move within forces and intensities that make no sense within such binaries as organic/inorganic, sentient/insentient, human/non-human. By this account, Dorothea Olkowski called Deleuze's and Guattari's approach to the body

1 | See, for instance, Orlan, »Carnal Art Manifesto (1989),« in: *Orlan. A Hybrid Body of Artworks*, ed. Simon Donger, Simon Shepherd and Orlan (New York: Routledge, 2010), pp. 28-29.

2 | See, for instance, writings on the most influential phenomenologist of the 20th century: Galen A. Johnson, ed., *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting* (Illinois: Northern University Press, 1993).

»non-humanistic«.³ To think about the human body in terms of its non-humanity does not mean to think of it as something radically other or opposite to the human; rather it allows us to rethink it in a non-anthropocentric way. The non-humanity of the body means that the body is constructed through forces and intensities that do not belong to humans alone; hence the human is not the only carrier of agency and meaning. Rather, what we call the body is co-constitutive of multiple exterior and interior agencies that belong simultaneously to human and non-human bodies, organic and inorganic. Accordingly, art that goes beyond the body and yet practices the body as intensities and forces of its materiality will here be called *bioart*.

To examine art when considering Deleuze's conception of the body is nothing new or extravagant. In fact, Deleuze, together with Guattari, mapped an extensive rhizomatic path between philosophy, art, literature and architecture in order to establish the distinctive line of their thought. According to Deleuze, as Elizabeth Grosz has said, rather than alluding to mechanisms of representation, art captures dynamic sensations and forces, and through them it links the body to the outside, with the cosmos, the non-human.⁴ For Deleuze and Guattari art opens thought to the non-human through these intensities mapped as affects and percepts.⁵ Although bioart's preoccupation with living organisms can be traced back to the beginning of the last century,⁶ its emergence today

3 | Dorothea Olkowski, »Flows of Desire and the Body-Becoming,« in: *Becomings: Explorations in Time, Memory, and Futures*, ed. Elizabeth Grosz (Ithaca, NY: Cornell University Press, 1999), p. 99.

4 | Elizabeth Grosz, *Chaos, Territory, Art. Deleuze and the Framing of the Earth* (New York: Columbia University Press, 2008), p. 3.

5 | See Gilles Deleuze and Félix Guattari, *What is Philosophy?* [Qu'est-ce que la philosophie?], 1991], transl. by Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), p. 169; Deleuze elaborates in depth on the notion of affect as a capacity of the body in his two books devoted to Spinoza: *Spinoza: Practical Philosophy* [Spinoza: Philosophie pratique, 1970], transl. by Robert Hurley (San Francisco: City Lights Books, 1988); and *Expressionism in Philosophy: Spinoza* [Spinoza et la problème de l'expression, 1968] transl. by Martin Joughin (New York: Zone Books 1992, 5th reprint 2013). I discuss Deleuze's notion of affect in art in more detail in Agnieszka Anna Wołodźko, »Materiality of Affect. How Art Can Reveal the More Subtle Realities of an Encounter, in: *This Deleuzian Century: Art, Activism, Life*, ed. Rosi Braidotti and Rick Dolphijn (Amsterdam: Rodopi, 2015), pp. 169-184.

6 | Although artists were using living organisms in their art, such as plants and animals as early as the 1930s and in the 1970s, what has today emerged under the name of bioart is an artistic practice engaged with the living matter on the molecular level such as bacteria, cells and DNA. For an introduction and the historical background to the

lends the notion of Deleuze's body a new importance, and demonstrates its ethical and political implications.

In the following article, I will discuss bioart as an art form that undermines the traditional distinction between biological and artistic media. In practice, bioartists redefine the notion of the body, its materiality and the notion of life in general. It is important to note that a traditional iconological approach would miss the vitality and ambiguity of the experience of bioart. Bioart, rather than remaining on the platform of representation, performs »on the level of an actual intervention into living systems.«⁷ I will therefore approach bioart in terms of the intensities it generates and the implications it evokes for the contemporary understanding of the body. Through an analysis of particular works of bioart, I will also study Deleuze's notion of the body as the highly urgent phenomenon we are faced with.

WHAT DOES BIOART DO?

The definition of bio-art is disputed. This strange hybrid word went through diverse changes and may still be replaced by such terms as genetic art, transgenic art, semi-living or biotech art.⁸ Generally, the last term refers to an artistic practice which is engaged with life sciences by working on cells, tissue or DNA.⁹ I prefer to use the term bioart, since this keeps the particular tension between the artistic and scientific tools that this art uses. By working with living, moist materials in their artistic practices, bioartists apply methods of life sciences in the field of the arts, expanding and redefining existing paradigms in both fields.¹⁰ Thus, instead of asking what bioart is, I will follow the Spinozian way

emergence of bioart and examples by well-known bioartists see George Gessert, *Green Light. Toward an Art of Evolution* (Cambridge, MA: MIT Press, 2010).

7 | Monika Bakke, »Zoe-philic Desires: Wet Media Art and Beyond,« in: *Parallax* 14/3 (2008), pp. 21-34, here p. 21.

8 | Gessert, *Green Light*, p. 120.

9 | See the text available online of Jens Hauser, »Bio Art – Taxonomy of an Etymological Monster,« in: *Hybrid. Living in Paradox, Ars Electronica*, 2005, http://90.146.8.18/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=13286 (last accessed 4-4-2016).

10 | See an introduction to art and science collaboration in the context of the bioart practice by Robert Zwijnenberg, »Preface. Art, the Life Science, and the Humanities: In Search of a Relationship,« in: *Art in the Age of Technoscience, Genetic Engineering, Robotics, and Artificial Life in Contemporary Art*, ed. Ingeborg Reichle, transl. by Gloria Custance (Vienna: Springer-Verlag, 2009), pp. xv-xxxii; also Zwijnenberg's article on the urgency of collaborations between art and science that bioartists reveal: »A Two-

in Deleuze's thinking and focus on what bioart actually does when dealing with living matter.

One of the most famous bioart works was created by Oron Catts, a trained designer, and Ionat Zurr, an artist. In 1996 they initiated an ongoing *Tissue Culture and Art Project (TC&A)* that is now based in *SymbioticA* at the University of Western Australia. This artist-run research laboratory provides artists and scientists with the opportunity for an interdisciplinary exchange when exploring the manipulation of life, which has become possible with new biotechnologies.¹¹ As Catts and Zurr state, their practice was inspired by the existing biotechnological possibilities of living matter manipulation. They explain the beginnings of their artistic research by referring to their fascination in actual biotechnological practices, such as extracting cell material from an animal that has been dead for a couple of hours, and the manner in which such cells can be grown forever once they are commodified into particular cell lines.¹² While there are wide ethical and legal questions involved, for Catts and Zurr it is crucial that we lack a proper language to address the related questions concerning the status or definition of life, and the ownership of the body and its commodification. This lack of a discursive platform and the need for a redefinition of what life is when it has itself become a commodified material, are the main focus of their work.

Catts' and Zurr's *The Semi-Living Worry Dolls* were presented at the *Ars Electronica* festival in Linz, Austria, in 2000. *The Semi-Living Worry Dolls* were the first tissue-engineered sculptures to be presented in a gallery context. Catts and Zurr explain that they created the modern version of the traditional Guatemalan Worry Dolls:

»The Guatemalan Indians teach their children an old story. When you have worries you tell them to your dolls. At bedtime children are told to take one doll from the box for each worry and share their worry with that doll. Overnight, the doll will solve their worries. Remember, since there are only six dolls per box, you are only allowed six worries per day.«¹³

headed Zebrafish,« in: *Moebius Journal* 1/1 (12. Dec., 2012), <http://moebiusjournal.org/pubs/14> (last accessed 4-4-2016).

11 | See the home page of the laboratory that is the part of the University of Western Australia www.symbiotica.uwa.edu.au (last accessed 4-4-2016).

12 | Krzysztof Miękus, »Life as Raw Matter. Interview with Oron Catts and Ionat Zurr,« in: *The Tissue Culture & Art Project* (2. Aug. 2012), by CSW Laznia, www.laznia.pl/wideo,3.html (last accessed 4-4-2016).

13 | See the TC&A project's website, »The Semi-Living Worry Dolls.« See: <http://tcaproject.org/projects/worry-dolls> (last accessed 4-4-2016).

The dimensions of Catts' and Zurr's dolls are 10 x 7 x 5 mm. They were hand-crafted out of degradable polymers (PGA and P4HB) and surgical sutures and then sterilised and seeded with skin cells, muscle cells and bone tissue which were grown over and into the polymers. During the growing process of the tissue the polymers degraded.¹⁴ Catts and Zurr named this phenomenon of co-dependence and reciprocal relationality of the artificial polymers with organic tissue »partial life«. They thus coined the term for their sculptures: »semi-living«.

»The Semi-Living are sculpted from living and non-living materials, and are new entities located at the fuzzy border between the living/non-living, grown/constructed, born/manufactured, and object/subject. The Semi-Living relies on the vet/mechanic, the farmer/artist or the nurturer/constructor to care for them. They are a new class of object/being that is both similar and different from other human artefacts (human's extended phenotype) such as selectively bred domestic plants and animals.«¹⁵

This phenomenon of the semi-living as the expression of what Manuel De Landa described as »the agency of non-organic life in our organic bodies,«¹⁶ has become an expanded and persistent practice of Catts and Zurr. Experimenting with how inorganic or insentient matter reciprocally relates to and influences the porosity of what is being considered as living, the TC&A project has constantly been posing new questions, experimenting with ethical and aesthetical boundaries of living bodies.

Soon after *The Semi-Living Worry Dolls* the TC&A project presented the *Pig Wings* (2000-2001). Using methods of tissue engineering, the artists made an installation using living pig tissue taken from bone marrow stem cells to grow three forms of different types of wings. Next, for *Semi-Living Food: Disembodied Cuisine* (2003), they grew a meat stake out of frog skeletal muscle, without necessitating the killing of the animal donor. In the exhibition the healthy living frogs were presented side by side with the living, growing meat. The show ended with the cooking of the steak and its consumption, enabling the debate on the ethical understanding of tissue culture to gain new intensity. Another project, *Victimless Leather* (2004-2008), which consisted of growing living tissue into a leather-like coat-shape form, undertook a similar problematisation of the artists' ironic and challenging attitude towards tissue culture and living

14 | See the technical explanation on the TC&A project's website, <http://tcaproject.org/projects/worry-dolls> (last accessed 4-4-2016).

15 | Oron Catts and Ionat Zurr, »Are the Semi-Living Semi-Good or Semi-Evil?« in: *Technoetic Arts: A Journal of Speculative Research* 1/1 (2003), pp. 47-60, here p. 53.

16 | Manuel De Landa, »Inorganic Life,« in: *Incorporations*, eds. Sanford Kwinter and Jonathan Crary (New York: Zone Books, 1992), pp. 129-167, here p. 153.

matter manipulation. Grown from a mix of human and mouse cells, fed with embryonic calf serum, this bioart work not only practised the utopia of a science without any victims, but also brought forward the agency of bodies without identities, prompting legal questions and ethical concerns with regard to bodies that lack fixed boundaries, species' divisions and personhood.

Importantly, each of Catts' and Zurr's bioart projects is also a carefully organised space for the presentation and support of their living sculptures. Their artwork is equipped with bioreactors – the artificial womb system that supports and feeds the cells – in a sterile environment similar to a laboratory. As they explain, »life is context-dependent, and living materials will therefore act and respond through its milieus – in the sense that material is vital.«¹⁷ They have recently proposed a description of their practice in terms of a »secular vitalism« which would challenge phenomenological as well as deterministic perspectives on the body, allowing for the emergence of ontologically undifferentiated living, non-living and semi-living bodies.¹⁸

In that sense, I argue that bioart exercises Deleuze's notion of the non-essentialist vitality of the body, where disarticulation and experimentation are practised. This means that the materiality of the body is understood as being composed of relations and processes, dynamics and processes of folding, rather than of fixed properties. In bioart's practice thinking about the body lacks any presupposition of a hierarchical distinction between bodies. Without suggesting that there is no differentiation between bodies, the artists test the notion of agency that can belong to any kind of body, sentient/insentient, organic/inorganic, human/non-human. Such an experimental approach to the body in bioart seems to resonate with Deleuze's notion of the body, where there is no ontological difference between bodies – they differ only in »the kind of affections that determine their effort to preserve in existence.«¹⁹ In other words, the difference consists of the kinds of affects, what the body can do, not what it is. Therefore, the question of the body concerns the question of these affects and intensities. To encounter the body in terms of its intensities brings our discussion back to the level of sensation rather than that of strict laws and theoretical abstraction. For Deleuze, intensities belong to the realm of presence; they are

17 | Catts and Zurr, »The Vitality of Matter and The Instrumentalisation of Life,« in: *Architectural Design* 83/1 (2013), pp. 70-75, here p. 73.

18 | *Ibid.*, p. 72.

19 | Deleuze, *Expressionism in Philosophy*, p. 258.

felt rather than thought.²⁰ They shape a move from the state of equilibrium towards the state of experimentation with fixed habits and patterns.²¹

Moreover, to attentively encounter the body within its dynamic intensity is to be faced with its asymmetrical relations. Since for Deleuze the body does not exist as a fixed individual, it is already a collective, and thus an ethical phenomenon. It involves the environment as well as other entities in an intensive relationality.²² Bioart as a particular form of dealing with the body's often risky relationality offers a unique chance to experience this ethical dimension, building bodies' vital intensities. However, as Catts and Zurr have suggested, such a vitalism has a secular dimension. This secularity means that the understanding of vitality goes beyond the essentialist tradition that conceptualised it as a force – as something that passes through all beings to activate and to move them. Rather, as secular, Catts' and Zurr's bioart practices a vitalism where matter itself has power and agency. To understand this difference between secular and essentialist vitalism, I will first elaborate on the particular notion of life as it is practised in bioart, which, in turn, brings us to the question of how Catts' and Zurr's bioart actualises the ethical and political implications for Deleuze's notion of the body.

PHILO-ZOË THROUGH THE BODY

Contemporary biotechnological possibilities and practices have reactivated the discussion about the nature of life and the body. In particular the humanistic division between nature/culture, human/non-human, living/dead is challenged today. In fact, as Joanna Zylinska observed, what we call the body, life, or the human has already been influenced and shaped by life sciences, particularly since the discoveries of DNA.²³ Following Deleuze and Guattari, Zylinska admits that mapping the sequences of this secret code made possible the formation of the inter-species, the inter-national »community of belonging.« It is already common knowledge that we share over 90 % of DNA with

20 | Joe Hughes, *Deleuze's Difference and Repetition. A Reader's Guide* (London: Continuum, 2009), p. 150.

21 | Deleuze, *Difference and Repetition* [Différence et Répétition, 1968], transl. by Paul Patton (New York: Columbia University Press, 1994), p. 117; see also John Protevi, *Political Affect: Connecting the Social and the Somatic* (Minneapolis: University of Minnesota Press, 2009), pp. 107-108.

22 | Protevi, *Political Affect*, p. 109.

23 | Joanna Zylinska, »The Secret of Life. Bioethics between Corporeal and Corporate Obligations,« in: *Cultural Studies* 21/1 (January 2007), pp. 95-117, here p. 96.

chimpanzees, and about 70 % with zebrafishes.²⁴ In that sense, the discovery of DNA and its cracking battle opened the possibility of pondering what Deleuze and Guattari would call the de-Oedipalisation²⁵ of family ties, making way for a consideration of bodies in terms of transversal relations but also in terms of the non-essential notions of life.

Catts' and Zurr's »semi-living« sculptures can be said to be a symptom of what Rosi Braidotti described as making life and living matter a subject and agent of practice rather than a passive object.²⁶ This focus on the agency of matter thus involves rethinking within the social and cultural theory the notion of life, which has been significantly influenced by Ancient Greek understanding. Referring to Aristotle, Giorgio Agamben reminds us that life was differentiated into two separate terms: *zoë* as a simple »fact of living common to all living beings« and *bios* as a »way of living proper to an individual or a group.«²⁷ In this distinction, *bios* as the sphere of *polis*, where logos and language have its domain, was the main focus of inquiry when discussing human life, its agency and subjectivity. *Zoë*, on the other hand, denoted the sphere of non-human, bodily nature. This implied that, even if humans share *zoë* with other beings, it must be excluded from the sphere of social *bios*. On the grounds of this fundamental exclusion of non-human *zoë* from the sphere of human *bios*, Western thought and politics is said to construct its relation to the non-human – to the body – as the simple biological life, »disposable matter in the hands of the despotic force of unchecked power.«²⁸

Overcoming the *bios/zoë* dichotomy would thus mean creating a new relationship to the non-human through the body; and as Braidotti argues, this capacity seems to be already embedded in the practices and discoveries of life sciences: »Contemporary scientific practices have forced us to touch the bottom of some inhumanity that connects to the human precisely in the immanence of its bodily materialism.«²⁹ For Braidotti, this *bios/zoë* egalitarianism of co-construction has deep ethico-political consequences. It gives way to a

24 | See, for instance, Carl Zimmer, »Genes Are Us. And Them,« in: *National Geographic Magazine* – *NGM.com*, <http://ngm.nationalgeographic.com/2013/07/125-explore/shared-genes> (last accessed 4-4-2016).

25 | Zylinska, »The Secret of Life,« p. 106.

26 | Rosi Braidotti, »Locating Deleuze's Eco-Philosophy between Bio/Zoe-Power and Necro-Politics,« in: Rosi Braidotti, Claire Colebrook, Patrick Hananin, eds., *Deleuze and Law: Forensic Futures* (London: Palgrave Macmillan, 2009), pp. 76-116, here p. 97.

27 | Giorgio Agamben, *Homo Sacer. Sovereign Power and Bare Life* [*Homo Sacer. Il potere sovrano e la nuda vita*, 1995], transl. by Daniel Heller-Roazen (Stanford: Stanford University Press, 1998), p. 1.

28 | Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), p. 120.

29 | Braidotti, »Locating Deleuze's Eco-Philosophy,« p. 98.

non-anthropocentric shift in thinking, which she calls »bio-centred egalitarianism.«³⁰

Braidotti's notion of life as *zoë* thus contrasts with Agamben's radical distinction between *bios* and *zoë*. For Agamben, *zoë* as bare life is a threshold of moral, social and cultural values. *Zoë* acts as a reminder of the bodily possibility of humans to become dehumanised and de-personalised. Moreover, deprived of *bios* as a linguistic, social and moral realm of human existence, *zoë* marks the »human body's capacity to be reduced to non-human.«³¹ The state of transformation as a result of the *bios/zoë* egalitarianism is thus a reductive phase. Mapped by him as the beginning of modernism,³² *bios/zoë* egalitarianism is characterised as a time of decadence, revealing »the abyss of totalitarianism that constructs conditions of human passivity.«³³ In other words, the lack of separation between *bios* and *zoë*, which was crucial for Ancient Greek thought, is presented by Agamben in the unflattering light of human regression to the non-human.

Braidotti's bioegalitarianism reflects rather what Deleuze and Guattari referred to with the paradoxical term »inorganic life.«³⁴ In his essays on life, Deleuze argues that life is independent of a particular entity or a being,³⁵ and he refers to his notion of life as being inorganic.³⁶ As inorganic, intensive and germinal, the body is alive because, rather than possessing or inhabiting life and expressing life's organisation, it is its difference.³⁷ For Deleuze, life is pure difference. Such pure difference should not be understood as fixed distinctions and oppositions – such as the *bios* and *zoë* dichotomy – but rather as an affirmation of dynamism and intensity.

In *Difference and Repetition* (1968) Deleuze had already argued for the necessity of rethinking difference in a non-essentialist way. He diagnosed that the current notion of difference needed a rescue plan from its subordination to identity, resemblance, opposition and analogy. In other words, he argued for

30 | Rosi Braidotti, *Transpositions. On Nomadic Ethics* (Cambridge: Polity Press, 2006), p. 37.

31 | *Ibid.*, p. 39.

32 | Agamben, *Homo Sacer*, p. 4.

33 | See Braidotti writing on Agamben in Braidotti, *Transpositions*, p. 39.

34 | Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia 2* [*Mille Plateaux. Capitalisme et schizophrénie 2*, 1980], transl. and pref. by Brian Massumi (Minneapolis: University of Minnesota Press, 2005), p. 550.

35 | Gilles Deleuze, *Pure Immanence. Essays on A Life*, transl. by Anne Boyman (New York: Zone Books, 2001), p. 26.

36 | Deleuze, *Negotiations: 1972-1990* [*Pourparlers 1972-1990*, 1990], transl. by Martin Joughin (New York: Columbia University Press, 1995), p. 143.

37 | Deleuze and Guattari, *A Thousand Plateaus*, p. 550.

the notion of difference in contrast to the philosophical dominion of identity, which indicated that to think about difference meant to presuppose something that differed from something else. In order to »think difference itself,«³⁸ where difference is not already subordinated to the notion of identity, he proposed the concept of difference as affirmation.³⁹ He focused, rather than on a diversity that operates on the level of phenomena of extensions and qualities of things, on the origin by which phenomena are given, namely on intensities:

»Difference is not diversity. Diversity is given, but difference is that by which the given is given, that by which the given is given as diverse. Difference is not phenomenon but the noumenon closest to the phenomenon. [...] Every phenomenon refers to an inequality by which it is conditioned. Every diversity and every change refers to a difference which is its sufficient reason. Everything which happens and everything which appears is correlated with orders of differences: differences of level, temperature, pressure, tension, potential, *difference of intensity*.«⁴⁰

Difference based on the relation of a negation subordinated to coherence and identity is thus at the level of phenomena, as the spatial and qualitative dimension of things. It is the process of intensities, the pure affirmative difference that drives them. As De Landa notices, such an affirmative notion of difference has a transformative, productive dimension. It reveals difference as the dynamic process of formation and creation behind the phenomena.⁴¹ Unlike Agamben's doomed diagnosis of modern thought, where life as *bios/zoë* opposition is built upon the presupposition of the fixed identity of its components,⁴² Braidotti follows Deleuze and opens a way to consider life itself – as affirmative distribution of difference.⁴³

In a way, bioart may thus be seen to support the *bios/zoë* dichotomy precisely through its manipulation of living matter, treating the body as if it were a passive material. It may be said that bioartists' practice treats life as a »secret to be cracked,« or revealed. One might say that bioart is far more related to the political and ethical policies of biogenetic corporations than one would want to admit. In their persistent manipulation of living matter, bioartists seem to enact the *bios/zoë* dichotomy and in this way, repeat the blocking of life's potential for

38 | Deleuze, *Difference and Repetition*, p. xv.

39 | Ibid., p. 52.

40 | Ibid., p. 222 (original emphasis).

41 | Manuel De Landa, *Intensive Science and Virtual Philosophy* (New York: Continuum, 2002), p. 4 and p. 60.

42 | Braidotti, »Locating Deleuze's Eco-Philosophy,« pp. 104-105.

43 | Deleuze, *Difference and Repetition*, p. xix.

»non-biological, non-essentialist kinship.«⁴⁴ In order to understand how bioart can nonetheless be understood in terms of a *bios/zoë* egalitarianist's practice, it is necessary to look closer at Deleuze's notion of vitalism.

SECULAR VITALISM

It is first of all crucial to stress that a focus on *zoë* as a non-human, trans-species force does not imply to a vitalistic notion of life, so characteristic of 19th century concepts of *Lebensphilosophie*. Deleuze's vitalism may be understood with the help of Claire Colebrook's description as »passive vitalism«,⁴⁵ or what Braidotti has called a »material vitalism«.⁴⁶ The major concern shared by both thinkers in their investigation of Deleuze's vitalism is to distinguish it from historical vitalism, which they hold to support dualistic connotations. Although, as Colebrook admits, this vitalism was at some point useful to feminist thought, particularly because it questioned the metaphysics of the reason that constructed the hierarchical opposition between mind and body in the first place, today such vitalism cannot be conceptualised without proposing major changes. For instance, the monism of vitalism, through its affirmation of life and its connotations of fertility, production, growth and creativity upheld the metaphysics of binary oppositions, prioritising all that is considered as active.⁴⁷

This problem of dualism thus reflects the historical philosophical dilemma of how distinct and contradictory elements can occupy the same sphere, for instance in everyday experience. How can they relate to each other? In philosophy, the solution led not only to discursive and axiological separation, but also to the hierarchisation of these distinct elements.⁴⁸ When Deleuze admits : »Everything I have written is vitalistic, at least I hope it is,«⁴⁹ he not only refers to his understanding of life as intensities, which he calls a »plane of immanence« and which is the major focus of his philosophy. He also expresses an urge to write, as if this touches upon the very presence of the pre-individualistic,

44 | Zylinska, »The Secret of Life,« p. 106.

45 | Claire Colebrook, *Deleuze and the Meaning of Life* (London, New York: Continuum, 2010), p. 7.

46 | Braidotti, *The Posthuman*, p. 56.

47 | Colebrook, »On not Becoming Man: the Materialist Politics of Unactualised Potential,« in: Stacy Alaimo and Susan J. Hekman, eds., *Material Feminisms* (Bloomington: Indiana University Press, 2008), pp. 52-84.

48 | See Elisabeth Grosz, *Volatile Bodies. Towards Corporeal Feminism* (Bloomington: Indiana University Press, 1994), pp. 3-6.

49 | Deleuze, *Negotiations*, p. 143.

non-categorical world of becoming.⁵⁰ This vitalism is therefore distinguished from other possible readings of vitalism, which Deleuze and Guattari have described as »an Idea that acts, but is not.«⁵¹ Unlike this essential vitalism, which needs an *Idea*, a subject as an active synthesiser that can categorise sensed data,⁵² Deleuze writes about life as absolute immanence – always indefinite and unspecified.⁵³ This means that not the idea of an active force, but the processes of relations are at the centre of his vitalism.⁵⁴

Since for Deleuze there is no categorisation pre-existing the phenomena of forces, art that captures these sensations can enable an encounter with them. As a means of preserving affects and precepts, art becomes a »monument« for Deleuze and Guattari.⁵⁵ This monument does not contain any reference to the past, as this would indeed evoke the representative character of art. Rather the notion of monument calls art to the present.⁵⁶ The experience is based on affect understood in terms of an embodied encounter that is transformative and supported by an unqualified sense of presence and realness.

Bioart, particularly, is based on such a non-verifiability. You cannot actually determine whether what you perceive is alive, real or dangerous, or whether something is biotechnologically engineered. At the same time, the assemblage of technical and medical tools in the gallery space and artists – sometimes even dressed in white coats – generates a sense of reality, and the lack of any essential difference between art and life. All this shows that, as Robert Mitchell argues, one's perception and cognition cannot be definitely situated.⁵⁷

In their practice, Catts and Zurr seem to be aware of the affective, relational character of matter and how matter is prone to dynamic changes and influences. Their term, *semi-living*, embraces their approach to living matter as an assemblage of things: tissue, polyester that degrades and makes possible the growth of cells, bioreactors that support the cells and the vague presence of a dead/alive donor from which still-living cells had been extracted. As such, Catts' and Zurr's bioart co-constructs Deleuze's notion of the body affective and vivid relations with the non-human. More importantly, their art calls for

50 | See John Marks, *Gilles Deleuze: Vitalism and Multiplicity* (London: Pluto Press, 1998), p. 31.

51 | Deleuze and Guattari, *What is Philosophy?*, p. 213.

52 | Deleuze, *Negotiations*, p. 9.

53 | Deleuze, *Pure Immanence*, pp. 26-27.

54 | Braidotti, *The Posthuman*, p. 56.

55 | Deleuze and Guattari, *What is Philosophy?*, p. 167.

56 | *Ibid.*, pp. 166-167.

57 | Robert Mitchell, *Bioart and the Vitality of Media* (Seattle: University of Washington Press, 2010), pp. 77-78.

attention to the body beyond the body, or to put it differently: bioart seeks the intensities and affects of matter and not the fixed properties of bodies.

A striking example of a bioart which experiments with the assembled alliance of the non-human is the performance *Que le cheval vive en moi* (*May the Horse Live in Me*, 2011)⁵⁸ by the artistic duo *Art Orienté Objet*: Marion Laval-Jeantet and Benoît Mangin. In preparation for this performance, which lasted for several months, Marion Laval-Jeantet injected horse immunoglobulins into her blood system in order to develop a tolerance to the foreign animal blood in her body. During the final performance at the Galerija Kapelica (Ljubljana, Slovenia) in 2011 the artist injected herself horse blood plasma. Due to the previous gradual and controlled preparation of her tolerance this injection did not result in an anaphylactic shock – a bodily allergic reaction to a foreign chemical. However, because these extracted components of horse blood are closely tied to the nervous system, the artist admitted that she experienced weakness, nervousness and high sensitivity during the performance and for some weeks afterwards. The performance ended with the artist on stilts imitating horse's limbs carrying out a communication ritual with a horse, during which her vulnerability and contamination became intertwined with the visible and audible anxiety of the horse.

Keeping to their philosophical and ethical intentions and their aspiration to overcome a sense of anthropocentrism, the artists exercised the impossibility of overcoming the limits of one's body. They staged an experiment with the body's control mechanisms and affects, which was based on the notion of symbiosis with another species. However, rather than focusing on enhancement as a necessary element of symbiosis, the artists searched for the imbalance of one's body. *Art Orienté Objet* literally experimented with what the body can do and what its affects are beyond hierarchisation and species' separation.

Nevertheless, the work of *Art Orienté Objet* may be seen to some extent as supporting the *bios/zoe* dichotomy in its manipulation of animal and human bodies as if these were bare passive material. To some extent, *Art Orienté Objet's* manipulative practice seems to continue to support not only the essential boundaries between what can be considered as life but also, as Zylinska pointed out, between those »who had the power to define, control or even own«⁵⁹ the secret of life and those who do not.⁶⁰ In 1999 and 2000, for instance, *Art Orienté Objet* while doing research with her partner Benoît Mangin at the Pasteur

58 | See the documentation of this performance on the website of Galerija Kapelica: www.kapelica.org/index_en.html#event=541 (last accessed 4-4-2016).

59 | Zylinska, »The Secret of Life,« p. 101.

60 | Take, for instance, contemporary biomarket of human gene patenting due to which practice already one-fifth of the human genome has been patented. This means that parts of our own genome are legally owned by companies and institutions as a result

Institute, for two years their experiment did not comply with the ethical policies of the institute. As the artist explains, despite the regular use of materials derived from animals in the lab, their project was considered unnecessary and even dangerous due to its artistic nature. However, from the moment that they presented their diploma in psychology and thus embedded their artistic work in the framework of their research on the psychological consequences of immune diseases in 2006, the artists were given permission to conduct further research.

Despite the institutional and discursive negotiations which forced the artists not only to follow necessary protocols and structures but also to change their initial ideas,⁶¹ their work remained remarkably non-teleological and non-instrumental. The performance was not about representing scientific goals or pursuing some trans-human idea of the fixation of the body into a desired form. After all, although monitored and under careful supervision of medical care, the performance explored the impenetrability of the body and sought to expand the body's porosity. The artists seemed to draw attention to the notion of the human as already post-human, beyond the fixed and given notion of the body, reaching toward its intensive and relational dimension.

Finally, it is important to stress that this relationality is far from neutral. Since *Art Orienté Objet*'s experiment examines relationality as a form of *transits-tasis* – instead of searching for a convenient balance between bodies, it provokes acceleration or destruction of bodies in the encounter. In that sense it suggests an ethical, political and aesthetical task to maintain a homeostasis without, however, aspiring to fixation and identification. This would mean developing new forms of attentiveness for entities that are already emerging, and attentiveness for the equally rightful forms of life that have been regarded historically to belong merely to the sphere of *zōë*. Attentiveness understood in this sense would, moreover, focus on experimentation with these new materialities in a way that respects the *bios-zōë* egalitarian realm of existence.

of their bio-prospecting or bio-piracy practice; see David Koepsell, *Who Owns You? The Corporate Gold Rush to Patent Your Genes* (West Sussex: Wiley-Blackwell, 2009).

61 | An experiment with a panda was their initial idea. However, due to laws of the protection of engendered species, – they chose a horse as a one of the animals allowed for the experimentation in the lab. See Marion Laval-Jeantet, »Self Animality,« in: *Plastic*, 3.06.2011, <http://art-science.univ-paris1.fr/plastik/document.php?id=559> (last accessed 4-4-2016).

CONCLUSION

In their practice, the bioartists discussed here attentively explore what Deleuze called the intensive notion of the non-essentialist materiality of the body, emergent and pulsating. This means that instead of asking *what the body is*, bioartists explore rather *what is does*. Through the non-teleological methodology of experimentation, they focus our attention on dynamic capacities of »living« matter. It is crucial that this materialist vital force of the body generates dynamic and risky encounters. The performance of *Art Orienté Objet* was a balance between a harmful and an enriching experience. It demanded careful, long preparation and adjustments in which the artist's body could become accustomed to being affected in order to be able to open up for a radically different and transforming material intervention.

Similarly, the bioart works of Catts and Zurr function within a transformative dimension of relationality. Each of their *semi-living* works needs constant, monitored care and feeding while on exhibition display. Thus, they incorporate feeding rituals into the every exhibition of their installations. Every day, they would feed cells within the gallery space as if they were in a laboratory environment. At the end of the exhibition they ran a killing ritual inviting the audience to take part in the killing process. Everyone could touch the *semi-living* sculptures, thereby carrying out a drastic invasive and contaminatory act that resulted in the sculptures' death.⁶² Accordingly, the artists embedded in their practice what Deleuze understood as the affective attitude towards the body. Driven by intensities and affects, the body's capacities are not neutral: they may increase, decrease or destroy the body.⁶³ To a great extent, the artistic proposition of Catts and Zurr formulate an inevitable ethical position, forcing the audience to encounter the body as a shared space of relationality. By incorporating ethical and political implications in their practice, they actualise the notion of the body in the context of contemporary biotechnological manipulation, forcing us to consider a redefinition of the relation between life and the body that goes beyond the *bios/zoë* dualism.

Effectively, Catts' and Zurr's *bioart* as well as *Art Orienté Objet*'s performance allow one to consider and encounter the actual implications of life driven by *bios/zoë* egalitarianism. In its secular vitalism, bioart emerges as a platform for bringing inhuman matter to human bodies and for releasing organised, passive matter into the flows of affective relationalities. Nevertheless, one should not forget that bioart as artistic practice is still at the periphery of academic attention: to scientists it appears suspicious, or it is instrumentalised

62 | Catts and Zurr, »Are the Semi-Living Semi-Good or Semi-Evil?« pp. 54-55.

63 | See Brett Buchanan, *Onto-Ethologies. The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze* (New York: Suny Press, 2008), p. 159.

by scientists, whilst art critics and art historians alike generally reject these new art forms. If art is resistance – as Deleuze understood it⁶⁴ – bioart resists canonical and identitarian fixations on many different levels. Most certainly, it withstands the *bios/zoë* dichotomy, enabling one to encounter flows of intensive matter.

64 | Deleuze, *Negotiations*, p. 174.