

LIFE IN ART | ART IN LIFE: BIOART ETHICS WITHIN THE ANTHROPOCENE

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Bioart has an important role to play at this critical point in history where the recognition of the event of the Anthropocene has happened, and now we are at a critical point asking questions of its consequences for our future. While bioart's definition is certainly broad, including notably tissue culture engineering (Tissue Culture & Art Project) and biorobotics as pioneered by Sterlac, we can also mention the genotype and phenotype reprogramming by Marta de Menezes, the transgenic art of Eduardo Kac, the bacterial art of Anna Dumitriu, the protozoa of David Kremers, and the well established work of Critical Art Ensemble.¹ What is missing from this slate of media used is live human embryos, which are completely off-limits for genetic artists. The fear of eugenic research should be dismissed.² This representative group of artists are all involved in various ways with science and forms of research that explore questions of 'life' from a perspective that *attempts* to avoid the corporate research agenda as well as mainstream science. In this sense they can play a valuable contribution to raising questions, if not directly then certainly indirectly, in a time when a planetary crisis has emerged. As Nicolas Rose (2006) succinctly put it, "Our very understanding of who we are, of the life-forms we are and the forms of life we inhabit, have folded bios back to zoe. By this I mean that the question of the good life – bios – has become intrinsically a matter of the vital processes of our animal life – zoe" (p.83). Rose's observation addresses the heart of the matter: interspecies co-existence at a time of critical planetary change.

Bioart's role in the problematics concerning life is paradoxical in what Rose raises, nevertheless crucial to raising concerns and tensions surrounding issues of post-anthropocentric thought that surrounds the Anthropocene in general. The profundity of life is shaped by the 'enfoldments' (if you are a Deleuze|Guatarian of 'becoming woman') or 'entanglements' (if you prefer to side with Karen Barad and feminism)³ of involution, evolution and devolution of life as *both zoe and bios*. The realization has come that our very sustainability is conditioned by non-humans. The entwinement of bios|zoe directly lies at the heart of a *post-ontological condition* wherein the deterritorialization of anthropocentrism has to take place with the full recognition that our species has to modify itself along physiological, neurological, and psychic dimensions in order to find a way to continue to co-exist on this planet with non-humans. This means recognizing the physical augmentation of the

body via technological means—what I refer to as *inhuman* artificial intelligence (currently primarily through nanotechnological implants),⁴ but dismissing the extreme heights of transhumanist aspirations of immortality where death has been eliminated,⁵ ultimately by transferring consciousness into the machine. It also means grasping our relation to non-human via the life forms we create, which is where bioart can be most helpful.

The distinction between the two senses of life can be broadly identified as the impersonal life of zoe, whereas bios is a life preserved under the sign of the human, politically coveted under state control and regulation, what Foucault (1997) dubbed as biopolitical life. That a ‘both|and’ logic, which goes beyond their dualism, informs them both, is not in dispute. Nor that ‘matter’ has energy (vitalism), which precedes hylomorphic thought. Yet such vitalism⁶ cannot fully be grasped as quantum physics ably shows despite the difference between physical, biological and the human seem to have no firm dividing lines.⁷ Things, just like humans, have affect. Zoe, as the *immortal* vitality of life itself, remains the limit of thought. The question is rather more as to what bioart can ‘do’ concerning this relationship when it comes to these two forms of life that are now in heightened tension with one another given human consumption and productivity as spearhead by corporations within a global capitalist economic are responsible, along with the G20 countries, for what has become a planetary crisis that can lead to our species demise.

The recognition of zoe as “bare life” by Agamben (1998) through states of exemption vivifies the politicization of bios along human lines, but such a position also subsumes zoe under the sign of anthropos in the various forms that sovereign power takes. The ethical questions concerning zoe remain unanswered. Do forms of life outside of the human need protection? What of viral infections and world-wide epidemics, like the contemporary Ebola crisis? Surely, this is a never-ending battle with death as we are ‘attacked’ by deadly microbes. On the other hand, capital investment in labour performed in and through the biosciences via pharmaceutical labs that are engaged in stem cell, protein, and DNA creation leads to the capture of ‘life’ as zoe through patents and intellectual property rights (Clough, 2007). Perhaps the apotheosis of such research is the utopian dream to harness the ‘immortal’ life of certain cell lines so that death and aging are no longer a concern.⁸ Zoe is constantly put in the service of bios on the grounds that the ‘good life’ remains with the ‘possessed individual’ (Kroker, 1992). This presents a situation where the enhancement of life is matched with its wilful destruction, a necropolitics as Mbembe (2003) coined it. What can bioart do to transvalue such a dichotomy, or expose the capitalist and state alliances that reproduce life as a commodity in its pure form: species and experience for sale.

What Can Bioart Do?

In 1998, when Kac wrote his seminal article for *Leonardo*, the idea was for artists to generate new life forms; one of the justifications for such experimentation was that *species were disappearing at an incredible rate due to the sixth extinction*. While Kac could not do his artistic experiments on a dog, as he wanted to, which was to mark a new ‘era’ in art, Alba, the rabbit became the infamous result.⁹ The question does remain: to what extent does the ‘artistic’ creation of life via bioart subvert biopolitics and releases zoe, a vitality that would help us come to terms with the wonder of life so that our anthropocentrism is thoroughly shaken? Mitchell (2010) seems to think bioart has such capacity to do so because it offers an embodied experience. He argues that “the fundamental (i.e., generative) sense of media—namely medium as a condition for transformation— encourages a sense of ‘life’ as less a property or informational pattern that is proper to organisms than a perceptual process of emergence” (11). Precisely what sensibility towards life emerges from these experimentations? In what way is the entwinement of bios and zoe related so that a public might encounter the materiality of the planet, *given that their very entanglement changes the relationship between them* as their ‘constitutive tension’ is

exposed? (Mouffe, 2000). These are difficult questions, as bioart does not escape them for they go beyond any normative questions—questions such as: Do artists have the right to play God? Should life be protected? Such issues are directed toward bioethics and the moral code that becomes defined by humanist signifiers: life, Nature, ‘the human’ (Zylinska, 2009). But here we are dealing with bioartists and bioscientists who are radically outside such a humanist paradigm. The questions their creativity raise go back to the Spinozian position: what can such bioart do, how does bioart affect other bodies, and how, in turn, is bioart affected as we now have literally a ‘living’ art. More succinctly this means life is affected and affecting; it is involved in a network of trans-species symbiotic dependencies. The human body itself is a multiplicity of human and non-human cells in various stages of symbiosis.

It is perhaps in this direction that an ethics as well as a minoritarian politics, following Deleuze and Guattari (1986) might begin to articulate the *larger project* of posthuman (as opposed to posthumanist¹⁰) subjectivities that are more attune with what Deleuze and Guattari (1987) called anorganic, or aorganic life; that is the recognition of nonhuman and (to extend their claim) *inhuman* life or artificial intelligence (AI), as immanent forms of life in all its manifestations. Bioart’s role would be to offer us glimpses of heterogeneous assemblages that offer challenges and insights to present capitalist commodifications of life. What might be forms of experimentation where the biotechnological mediated bodies are capable of resisting neo-liberal appropriation of living entities for profit and trade?

What has become one classical response to such issues was answered by Tissue Culture & Art’s (TC&A) sculptural creations of “semi-living,”¹¹ which occupies a position that intervenes in the zoe|bios entanglement, more on the side of zoe than bios. Semi-living sculptural beings are said not to be totally manufactured beings, simply because the cells are harvested from human and nonhuman host bodies. Nor are these created beings controlled by humans, but grow *in vitro* in unpredictable ways. They are “new subautonomous entities located at the fuzzy border between the living/nonliving, grown/constructed, born/manufactured, and object/subject” (Zurr and Catts, 2007, p. 232). Whether Zurr and Catts, the duo who make up TC&A, are convincing enough that the established ‘feeding and killing’ rituals of their sculptural creations as their “extended bodies,” sensitise their audiences to life as being on the edge of death, always remaining in balance. Here dying means to merge with the environment, illustrating the dependencies of the organic and inorganic realms. It depends upon the transference of the encounter between audience and these living entities.¹²

Such ‘liminal lives,’ claims Squire (2004), which are placed *in vitro* (embryos, organs, stem cells) immediately move from zoe—the fact of being alive—to bios as they require a special environment to survive. They are given an individual form, not only by biomedicine, but also by bioartists who work with them. This Zurr and Catts (2007) admit. Semi-livings “rely on the wet/ mechanic, the farmer/ artist, or the nurturer/constructor to care for them” (p.232). The relationship to living art by the bioartists does raise the question of attachment. While the bioart work ‘lives on its own,’ the care factor looms large: life and death are intimately related and the question of the removal technological life-support system becomes an ethical concern. When sentience comes into play via neuronal assemblies of cells, then the question of suffering further arises.

In her thoughtful recollection of working with cells (Saos-2 cells, a bone cancer cell line established in 1973), Svenja Kratz (2012) provides an insightful narrative as what an artist faces when working in a scientific laboratory. She gives her readers an account of her misconceptions in relation to what she was observing as she continuously cultured these cells. “When I see cells, I automatically imbue them with my experiential knowledge and particular systems of belief. I anthropomorphise them and give them characteristics of animals: bodies, tendrils and different types. Like breeds of cats with individual personalities and ‘breed’ traits” (p. 271). Kratz begins to grasp living processes and even admits to ‘loving’ the cells she is growing. What arises is whether Zurr and Catts, in relation to Katz, are anthropomorphizing their semi-living being? It is obvious that they do. So the question is always

when to let go. An existential crisis I should think. Mark Dion's well-known *Neukom Vivarium* (2006) installation can be called a semi-living entity as well. A Western Hemlock tree is kept 'alive' via the technological wizardry of the greenhouse gallery specially built that houses so that its ecological system is sustained. Like TC&A, there is an educational component to installation. The question remains: is such an elaborate display merely to state an ironic comment about the ecological well-being of our planet? Perhaps the 'true' irony is that Bill and Sally Neukom of American Express Company helped support the project, so much so that their names are now stamped on this 'semi-living' entity in good corporate fashion.

Perhaps it is not possible for a non-capitalist system at the present moment to develop new assemblages with another ethics towards the planet? Can bioart point to other potential Xpressions,¹³ which can make a difference to furthering, what might be called, a post-ontological condition that enhances a planetary consciousness as to the state of our existence as a species who has managed to tip certain threshold scales that sustain an earth-for-us? When bioart is actualized in laboratories or art galleries, they present a temporality that has had nominal affect on the public thus far. They especially map a space of experimentation that intertwine art and science for the purposes of heightened awareness of our present planetary situation and perhaps, given enough intensity, a singularity will be reached where a planetary conscious might emerge via contagion, perhaps like the Axial Age before.¹⁴ But there are no guarantees, and the situation does not seem probable. Robert Mitchell (2010), however, would disagree with such an assessment. He makes the point that a new paradigm for understanding 'media' emerges with bioart: media in art has historically referred to the substance that facilitates expression, experiences, and thoughts, yet the embodiment of an artistic medium is generally undertheorized. Its subjective stance now meets the objective stance in the case of 'media' in the sciences, which refers to the fluids or solids that researchers use to cells and organisms alive. Such a folding forms an entirely 'new' media that opens up new 'agential' possibilities through affect. For Mitchell, vitalist bioart¹⁵ creates an *embodied sense of spectatorship*. He maintains that viewers become aware that they are biologic entities and the socio-political capital that is attached to such viewing. In other words, Mitchell claims that the likelihood of an 'embodied' encounter is enhanced in the context of bioart. The object, a living entity, is more likely to 'look back' and disturb perception so that the spectator starts 'to think' in relation to what just happened. Mitchell maintains that it is the feeling of abject, or disgust that penetrates the body at the affective level when it comes to bioart. The Semi-Living Worry Dolls and Victimless Leather of TC &A are prime examples here. Transference certainly must occur between these living object and spectators.¹⁶

Such encounters, however, are much more contingent than he suggests. Yet, Mitchell argues that bioart, through its processes, encourages a sense of the emergence of life. The exchange is an oscillation between becoming-a-medium and becoming-an-agent (p. 71). It is within such a folding, which describes the Deleuzian encounter in general, that thought happens *immediately*.¹⁷ This is Mitchell's point as well. If an encounter happens, it alters the relationships amongst the elements of the assemblage (tools, techniques, institutions, public). Mind|body (mental|physical) undergo change. Following Simondon (Mitchell, 2012) a 'communication' between previously unconnected parts of the assemblage takes place. A living system undergoes modification and is individuated as the relationship to its milieu also undergoes modification.

Another way of grasping this is through Laplanche's (1999) theory of the "enigmatic signifier."¹⁸ For bioart's affect to take hold as an 'embodiment' for the spectator, its function as a signifier to signify *something*; that is, its usual ability to convey content, message or representation, has to fall away, and function to signify to *someone*. The 'living art work' addresses, interpellates, or calls to the spectator. It 'looks' back at the spectator. This is the moment of embodiment: in other words the outside becomes indistinguishable from the inside as subject|object become folded on one another, entwined in a zone

of indiscernibility. The result is a becoming-other in the Deleuze–Guattarian sense. An *event* takes place as the ‘force’ of bioart becomes ‘present’ and ‘intense,’ turning the spectator into becoming imperceptible, meaning losing ground with the world-for-itself, a threshold of his or her consistency has been crossed, opening up the potential for a world-yet-to-be. In this way the time of the future opens up as new imaginings take pace after this event.¹⁹

The transference in terms of the participating audience should raise the ethical questions that surround ‘suffering’ and ‘survival’ as the link between humans and nonhumans, especially in relation to sentient life, where the gap between human and the more-than-human-world is closest. In this regard Adam Zaretsky’s (2002) *Workhorse Zoo* installation provides the exemplary case of attempting to raise questions regarding animal cruelty and care. The weeklong installation (along with artist Julia Reodica) took place in an eight-foot-square clean room filled with roundworms, mice, yeast, wheat plants, zebra fish, flies, flogs, bacteria and *Homo sapiens* (Zaretsky and Reodica). On the last day (Caveman Day), the gallery goes and Internet audiences in a reality TV manner, unexpectedly witnessed mice cannibalism. During the duration of the installation Zaretsky asked visitors to the exhibition to answer “bioethics quizzes” as to what they were witnessing. Similar to Mitchell’s point developed above, and Laplanche’s enigmatic signifier that these questions provoked, the procedure was to work through the embodied affect that had produced emotions of disgust, abhorrence, passion or simply indifference, which would indicate no encounter had taken place. It is a way, pedagogically one would say, of helping to articulate the non normative ethical surround of responsibility that emerges from, during, and with such installations.²⁰

Ethical Paradoxes

In 1998 Kac wrote: “With the creation and procreation of bioluminescent mammals and other creatures in the future, dialogical interspecies communication will change profoundly what we currently understand as interactive art. These animals are to be loved and nurtured just like any other animal” (n.p.). Since penning those words it seems glowing tropical fish and similar superficial green glowing life forms have been produced. Kac’s “plantimal” *Edunia*, a genetically engineered pinkish flower, a hybrid of the artist and a petunia where Kac’s DNA is expressed in the red veins that traverse its petals, is certainly notable achievement. It’s called a plant-human chimera, a literal anthropomorphization of plant-life. This noble idea seems to be a failure, as these seem trivial in relation to the scale of the sixth extinction. Kac is ‘humanizing’ a plant at the molecular level. What are the ethics that surround this? Is putting on the seed package, “Take good care of it and it will reward you with joy and companionship,” enough?²¹ Deleuze and Guattari (1987), in their playful attempt at articulating what they call ‘becoming animal’ privilege the ‘wild’ animal over the domestic on the grounds that the ‘wild animal’ is able to decenter the human further. It would appear at first that Kac is much more concerned with furthering the dominion of the human over the animal as transgenic art manipulates the genetic material directly, surpassing breeding in achieving effective results. Unless one sees Kac’s ‘experiments’ as contemporary forms of Duchampian ‘readymade’ that expose science as art and art as science, this direction of bioart remains problematic.²² How should one encounter his installation *Genesis* exhibited only a year after the *Leonardo* article was published where the Bible and genetic engineering confront one another. Not to take it as a biting comment of anthropocentric creationism that elevates the human above all things would leave us at a loss as to the force of his work. For me, Kac is the contemporary Duchamp of the bioart world.

Bioart makes it vividly clear that the human and nonhuman relationships require new forms of comprehension when we consider the extraordinary variety of cell and tissue cultures, hybridization and selection of animal, plants, insects, homo-transplantation, synthesis of artificially produced DNA sequences that create new forms of life. Critical Art Ensemble, based in Buffalo and the above

mentioned Perth-based Tissue Culture and Art (TC&A), remain the most written about Bioart experiments, mainly because of their longevity and media coverage in the way they both try to expose issues that surround biotechnologies within corporate capitalism, and the continuous commodification of 'life.'²³ Yet, it was the arrest of Steve Kurtz in 2004, one of the founding members of the Critical Art Ensemble, by the FBI and the Joint Terrorism Task Force, which helped to mobilized a defense fund to help him flight against his conviction. The Patriot Act enables a 'state of exemption' so that the state could intervene when 'illegal use of biological agents' are involved. While Kurtz was eventually released, the incident highlights the way 'agency' of the biological materials escalated to make a difference. In other words they began to 'count' affectively, only in terms of their role in the newly formed assemblage of 'bioterrorism.' We move from CAE's local performances to a global scale. Critical Art Ensemble and TC&A engagement to expose the biopolitics of capitalism relies extensively on irony and parody. This, in itself, has made little impact on the issues of biotechnologies of such things as tissue culture engineering, inter and intra species communication, human genetic enhancement, reproductive technologies, genotype and phenotype reprogramming, hybridization techniques, seed modification (GEN), and the like. Although one can readily claim that the wetware used has performative effects on participating audience, the impact seems pale to the ethical and political issues that became mobilised once Steve Kurtz was arrested, an incident that was entirely contingent: the sudden death of his wife (a heart attack) was linked to the 'scientific materials' the paramedics at saw in his house while attending to his wife. The paramedics called on the state apparatus of control to intervene.

Bioterrorism is not the only game in town. We live in a 'society of control' (Deleuze, 1992) where surveillance is ubiquitous and hidden. It is to the credit of Heather Dewey-Hagborg, a 30-year old PhD student studying electronic arts at Rensselaer Polytechnic University in NY, to address this question of surveillance and the use of DNA evidence when investigating crimes. Controversially, Dewey-Hagborg extracts DNA from cigarette butts and fingernails, chewing gum and coffee cups. She collects and sequences specific genomic regions from her samples, and then is able to compare the sequences to those found in the human genome databases. From this she is able to determine ancestry, gender, eye color, propensity to be overweight, and other traits of facial morphology. The data is then fed into a computer program that produces a facial model of the person who left the hair, gum or whatever behind. Using a 3D printer, life-size masks are created as part of an exhibit. The accuracy of the 3-D facial model produced by the printer is astounding close as the use of her own DNA shows.

All this raises questions of DNA profiling being used as evidence: legal and ethical questions regarding if we 'own' our DNA; what's public and what's private, which is continually contested ground. Is the facial mask that has no name equivalent to a photo? What is the relationship between identity and representation here? Is this a misuse of data? A risk gene for mental disorder could be found in the DNA sample and then used maliciously: then what? Above all perhaps, it raises questions of representation. What do genetic traits (like ancestry) tell you how a person looks? The ethical questions simply multiply. Since the initial launch of her exhibition, *Stranger Visions* at New York's Eyebeam art and Technology lab, Dewey-Hagborg has founded a company BioGenFutures, named after the lab where her experiments took place. It manufactures a product called "Invisible," a cleaning agent that will destroy 99.5% of one's trace material. A further product called "Erase" covers up the remaining .5% with DNA material from other sources. The irony of these products should not escape us.

The zones of indistinction between bios-zoe where becoming takes place are precisely where the ethical dilemmas are created, where responsibility must be taken and an 'agential cut,' as Barad (2007) would have it, made. That is, bioartists as part of the assemblages they occupy are not excused, but accountable for the way they contribute to the desire that circulates amongst the actants. An extraordinary difficult task given the complexity involved. The ethics of what are the effects that the

biomaterial as 'medium|media' is 'doing' in terms of the ways a body *as medium* is affecting and being affected is always present. In the case of TC&A the affects of their experiments are to induce the uncanny, to engender an estrangement, which will, in turn, produce a recognition of responsibility as spectators become co-performers in the 'killing rituals.' Zoe in the service of bios is to induce a critical consciousness in relation to biotechnology in general. But, it seems to me this is only one of the potentials.

We can contrast this involvement of bioart to yet another ecological form. Whether one can subsume Andy Goldsworthy under the bioart label, might be a stretch, but his ecoart, like Bower birds, creates territories that equally harness zoe under bios that change their relationship and release 'life' in ways that creatively 'adds' to Nature (as Kant would have it) by being attuned to its dynamic processes of movement, change, light, growth and decay. Points of singularity are found in the media he uses via the craft skills generated throughout the ages as applied to stones, wood, leaves, ice, roots, fibres, and so on. If this weren't so, his structures would not stand up for the fleeting time that they do in a life-death cycle. While clearly Romantic, the 'wilderness' that he taps and speaks about is obviously life as zoe. The circular 'void' that appears in many sculptural forms is a *dead* give away of a transcendental vitalism closer to an animism that is found in all things. Yet, the relation to bios is held at a minimum. Many sculptures are isolated, marked only by the 'site/sight/cite' of a gallery, which either exhibits a resemblance of the work via photographs, a form of repetition, or maps the site where the work may be found should the gallery visitor be willing to trek into the 'wilderness,' and 'tumble' on it, thereby mediating his|her body for a potential encounter. It seems to me this is yet another way to evoke thought through the *beautiful*, as distasteful as this word has at times become. Goldsworthy's constructions vivify that zoe is the play of living matter in general, for Nature has no lack or excess (Bataille) when it comes to creative evolution (Bergson). This could then be contrasted to the labor of bioart involved in horticulture (through expertise and time invested) as revealed in the nascent capitalism of the Netherland's tulip industry. Here (again as Kant would have it) creativity adds to Nature but at a price. As Bryson (2001) put it in his analysis of Dutch still life paintings: "[N]othing is accepted as a gift in nature. The Labour of horticulture, the forcing of varieties [...] it is as if the value of flowers were created by human effort alone" (p.110). The commodification of nature is well on its way.²⁴

Perhaps to end the difficult question of asking what can bioart 'do' ethically when it comes to zoe|bios enfoldments in relation to the anthropocentrism of the Anthropocene is to turn to performance body artists that present yet another manifestation of 'laboratory' experimentation, but this time on themselves. I have two well-known artists in mind: Marina Abramović and Orlan. Abramović's assemblages takes place in a gallery setting, while Orlan's assemblages in the past have embedded her 'carnal' art within the context of the plastic surgery.

In an insightful chapter, Max Liljefors (2012, pp. 178-185) addresses Abramović's series of performances entitled *Rhythm*, numbered *Rhythm 10*, *5*, *2*, *4* and *0*, in that order. As a series of repetitions that explore the relationship between body and self through the endurance of self-inflicted pain through various ways of objectifying her body, Abramović explorations of de-subjectification led her to a last performance, *Rhythm 0* (1974) where she made an attempt to reach what might be thought of as a zero state of bodily productivity, a stillness that could be equated with the minimalization of bios given that the gallery setting remained, creating a 'state of exception' in Agamben's term, with one major difference: the withdrawal of sovereign power, or rather the confusion as to the order words of the 'permission' given to act: was it the artist? The gallery? Abramović became the medium|media to be used and 'played' with. The performance lasted chronologically for six hours, then punctually Abramović 'came to,' and regained her subjectivity. The gallery audience (some invited, some taken off the street) had been given 'permission' to do whatever they pleased to her body with the 72 instruments

provided for them. Amongst them were such ‘harmless’ items such as a rose, a feather, and honey, but also menacing items such as a whip, a pair of scissors, a scalpel, a gun, and a bullet. The performance ended with violence and aggression to her body. Upon ‘waking up,’ Abramović approached her ‘audience.’ They all fled.

In terms of bioethics of the human body that her experiment raises, it perhaps reveals how the ‘laboratory assemblage’ (gallery space, 72 items, audience-invited and off-the-street, de-subjectified artist) set up with instructions of what appeared to be unlimited permission to act, revealed the emergence of a situation where the ‘killing’ of Abramović was a hair’s breath away. One member loaded the gun, pointed it towards her head, and then attached Abramović’s finger around the trigger and began to squeeze it to see if she would resist. Another member of the audience stopped this and removed the gun. Unfortunately, members of the participating audience were not questioned to further tease out the dynamics of the system that unfolded, yet it remarkably demonstrates (like the ‘zoo’ of Adam Zaretsky mentioned above) how the contagion of affect circulates, how desire emerges, and how crucial responsibility for what a body actually ‘does’ needs to be taken into account. Abramović’s own responsibility, of course, cannot be excluded. This ethico-aesthetic paradigm, as Guattari would have it, shows our responsibility for modes of living as they come into being. Perhaps this is why, in a more recent performance of de-subjectification, where an existential territory again is created in a gallery space. It offers the gallery-going public a more charismatic but no less risky assemblage to occupy for the transferences of embodiment. This time no violence resulted from *The Artist is Present* (2010). Abramović sat silently in a chair for seven days a week over the course of three months, wordlessly encountering members of the audience who were invited to sit opposite her for as long as they pleased.

Finally, one last example: that of Orlan. While Orlan is best known for her surgery performances, it is her performance of *Harlequin Coat* (2008) that is most pertinent to this discussion of the ethics of bioart and the Anthropocene as it involves wet ware. In *The Harlequin Coat*, she directly quotes Deleuze from the *Logic of Sense*, “Our sexual body is initially a Harlequin’s cloak.” What Deleuze (1994) means by this is that there is a distinction to be made between “difference and diversity” (p. 222). Identity of difference or an identity produced through difference is not to be equated with identity as a type or kind, produced through representational categorizations. This is diversity. Rather, the genesis of actual entities as identities of difference emerges from a field of virtual problems, from the structures that direct actualized entities. The distinction between difference and diversity directly addresses questions of identity which have informed Orlan’s own problematic; that is, her style or ‘diagram of becoming’ throughout her many body performances.

The array of potential actualizations were explored in a previous work before *The Harlequin Coat*. *Self-hybridizations Precolombienne* and *Self-hybridations Africaine* were a series of computer-manipulated self-portraits wherein Orlan inscribes herself into iconic signifiers of beauty that originate outside of Western culture (scarring, manipulating the cranium by flattening it or enlarging it, lengthening the neck through rings and so on). This series begins to appropriate physiognomic features from other cultures into new assemblages. They are virtualizations, formed by historical memories that come together to produce impossible hybridic cultures, creative in the highest sense of heteronomous desiring machines that have symbiotically come together. There affects, for the Western eye can harness abject disgust. These may or may not be actualized through surgical means, but their potential remains. In this sense Orlan has to take responsibility for the difficult question of appropriation. Western art and artists have always appropriated the Other. Anthropology as a science ‘invented’ the Other, and as such reproduces cultural representation as the new form of postmodern racism.

The Harlequin Coat, as an interspecies experiment on herself, goes beyond these ‘sketches’ of self-hybridic mutation. Ethical issues of appropriation are lessened, for the installation offers a further

abstraction by an ethico-aesthetic machine that takes us to the molecular and genetic level itself. The artist's body becomes material used to reconstitute the Deleuze|Guattarian concept of the BwO in a dramatic way. Orlan's plunge into biotechnology through her *The Harlequin Coat* project is not as invasive as her previous bodily performances, but it does 'perform' on another register: it becomes carnal rather than body art raising the question whether Deleuze's Spinozian epitaph "what a body can do," which Orlan also quotes when discussing this work, can be extended to the cellular level. *Harlequin Coat* begins to go beyond the explicit body of representation and reaches non-representational status—imperceptibility, by way of the material of her own cell at the genetic level. The hybridization of her skin cells took place by seeding them with a 12 week-old female foetus of African origin, as well as utilizing the fibroblast muscle cells from a marsupial (a fat-tailed dunnart), all with the help of SymbioticA's laboratory (located at The University of Western Australia in Perth). The cell now becomes a molecular machine. The project is meant to further problematize multiculturalism and faciality in the way that hybridity has become more cleverly categorized through the specificity of genetic engineering and DNA analysis.

It should not be forgotten that Orlan also called her *The Harlequin Coat*—"a modified Readymade," which she says is an "unsaleable and almost unshowable" work (2008, p. 87, added emphasis), which is perhaps an allusion to Kac's Alba. Orlan's cell 'culture,' with all the nuances that this signifier now has in its impossibility for definition, placed within the patchwork of the colorful Harlequin's coat, itself an assemblage of all such nonrepresentable 'cultures' within a totality that cannot be totalized seems an appropriate image to end this essay.

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Endnotes

1 This listing is rather vague in relation to the distinctions and overlappings that have been made between genetic art (art involving DNA), transgenic art (organisms modified through genetic engineering), biotech art (traditional breeding, cloning as well as genetic engineering) and bio art (art created in association with nonhuman organisms). See Hauser et al., 2007, p. 11).

2 This is a common accusation against genetic art. Paul Virilio (2003) presents one outstanding example of this.

3 I state this early in this essay since I am referring to the historical tensions between the Deleuze|Guattarian position of 'becoming woman' as developed in their work, a *Thousand Plateaus* back in 1970s. Becoming woman was the necessary *first step* in overcoming the 'ends of man,' which is synonymous with the 'end of the human' as developed and understood within humanist discourse; namely as an *earth-for-us*. However, Braidotti (2013), who is also sympathetic with the Deleuzian position has sided more with the signifier feminism, as has Karen Barad (2003, 2007) with her "intra-active becomings," "agential cut" and "apparatus" that appears to have the same equivalency to the machinic in Deleuze|Guattari. Other theorists such as Claire Colebrook (2013, 2014), who is also sympathetic to Deleuze|Guattarian thought has attempted to rethink 'becoming woman' from a much broader position where feminism and queer would all be subsumed into the n-1 potentialities of sexual difference. This is closer to Grosz's (1993) reading of 'becoming woman' as a 'thousand

tiny sexes.' I side with the n-1 position as the multiplicity of sexes, which strikes me more in tune to possible proliferation of interkingdoms.

4 This would now include robotics where neuronal assemblages from nonhuman means are employed within entirely new assemblages. The interface between living neural assemblages and prosthetic extensions of one kind or another brings the nonhuman and inhuman together.

5 Here the myth or legend of the 'fountain of youth' comes to mind as an earlier form of grasping creative life of zoe. Darren Arnofsky's film *The Fountain*, based loosely on the 16th century Spanish explorer Juan Ponce de León, provides us with the images of the creative force of zoe in the form of a tree that is as beautiful as it is deadly. A similar image of zoe manifests itself in Luc Besson's film *Lucy* (2014), who turns into a pure life form of zoe as she is able to use 100 percent of her brain capacity. Her body metamorphizes into 'pure' material energy. The same fantasy is restaged in Wally Pfister's *Transcendence* (2014). These images of zoe, while transhumanist in orientation as the body is left behind, point to the 'neuro-image' (Pisters, 2012) that has emerged where the rhizomatic structure of the brain has become the time|space for new cosmological imaginaries of escape. In Cameron's *Avatar* (2009), the attempt is made to link the Hometree on the planet Pandora that connects the biological neural network along with the Na'vi as forming a planetary consciousness. The associations to James Lovelock's Gaia hypothesis seem obvious. Cameron retains the utopian vision of Gaia that Lovelock himself has eventually dismissed.

6 To be very careful here, perhaps neo-vitalism is more accurate as vitalism itself is zoe-centric, assigning an essence to all life by maintaining something irreducible to the material, numeric, or mechanistic levels. This essence becomes a life-force or immaterial 'information' or a code. Vitalism is therefore a form of transcendentalism as 'essence' is put above life, and yet is central to it. In distinction a Deleuzian-Bergsonian vitalism does not posit an essence. Rather than essence, inorganic (or nonorganic) life, or simply the *nonliving* within the living manifests the becoming of the living when a particular limit is reached. Such a neo-vitalism holds potential of becoming within the nonliving as the emergence of life. Nonliving becomes another term for *durée* or the virtual. In this formulation, the virtual marks the limit of thought to think life. The moment of creation is always aleatory (see Thacker, 2007).

7 With the somewhat 'tenuous claim' that the Boss-Higgs particle actually does exist, this simply confirms the understanding of how quantum particles 10^{-17} in size relate to one another as quantum physicists had predicted. However they are unable to account for other smaller thresholds at 10^{-34} where phenomena become once again problematic, and the weak gravitational force has proven an issue as well.

8 The extension of life as bios is constantly occurring as mortality rates in postindustrialized countries have steadily decreased due to health. World population growth continues to increase.

9 The controversies surrounding Alba still persist. Was such a rabbit even produced since it was never shown? George Gessert, one of the pioneers of bioart, provides a historical review of this controversy (Gessert, 2010, p. 211-212, footnote 20).

10 I recognize that these words are confusing. Posthumanist for me is the adjective to posthumanism and not posthuman. I take posthumanist discourse as simply extending the humanism where anthropocentrism remains, as does the problematic term 'Anthropocene,' which gives the impression that is 'man' who is directly 'causing' climate change rather than grasping human activity as one actant amongst many that contributes to this change. Is our overproduction of carbon contributing to climate change? Obviously, yes, but it is also carbon that is an actant in this planetary assemblage of the biosphere. Life as zoe, as a planet-in-itself, is not undergoing climate change. We are.

11 TC&A's artwork is well documented, cited and written about. *Semi-Living Worry Dolls* date

back to 1996 and exhibited in 2000 at *Ars Electronica* in Linz.

12 The question of ‘touching’ within interspecies would need to be explored here as the ‘killing’ is done by audiences touching these semi-living entities. For example, the mimosa plant readily responds to touch, which raises questions of ‘aliveness.’ Denise King’s work *Mimosa Prudica Greenhouse* explores this.

13 The spelling is to differentiate art as expression in its humanist contexts. Xpression refers to what bioart can actually ‘do.’

14 Axial Age is described by Karl Jaspers as emerging from 800 to 200 BC where major religions of the then known world were formed: Taoism, Confucianism, Zoroastrianism, Buddhism, Hinduism and Jainism. I suppose the work of Negri and Hardt (2009) have something similar in mind in their exploration of the “*commonwealth*.”

15 Mitchell (2010) distinguishes two forms of bioart in his seminal book. The first is prophylactic bioart where the idea is to protect the public from the effects of biotechnology. The second is vitalist bioart. Spectators are used “as a means, or media for generating new biotechnological possibilities” (p. 27-28). Spectators need to be immersed, linked or exposed to alternative practices of biotechnology. “Vital bioart is [...] primarily exploratory and experimental: that is, rather than seeking—or seeking to safeguard—the ‘meaning of life,’ vitalist bioart instead explores what life can *do*” (32, author’s emphasis).

16 To follow Kristeva’s (1982) well known work on abjection as a supplementary correction of Lacan’s *objet a*, the abject object disturbs the Imaginary screen.

17 In my own work (Jagodzinski, 2010) I have dubbed such an encounter self-reflexion. The capital X distinguishes it from Cartesian self-reflection and poststructuralist forms of constructivism where self-reflexion became the standard signifier.

18 Unlike Lacan, the signifier for Laplanche is not simply linguistic but material. While Lacanian psychoanalysis is weak in grasping bodily affect Kristeva, Irigaray, Laplanche, Green had tried to shore up this inadequacy. Deleuze|Guattari of course, made the break with Lacan.

19 I have reiterated what could be taken as a distillation of the contribution Deleuze and Guattari (1991) make to the encounter with ‘art’ in general, and not only bioart that is said to enhance this even further. Guattari’s (1995) singular contributions to an ethico-aesthetics of life have also been well explored (O’Sullivan, 2010; Haynes, 2013).

20 See Zaretsky (2004) and Zylinska’s (2009, pp. 160-163) discussion of Zaretsky’s work.

21 In contrast to Shiho Fukuhara and George Tremmel who, in their DIY biotech project *Common Flowers|Flower Commons*, engage in a form of biological wetware. They hacked the patented Moondust carnations owned by the Japanese company Suntory, and released them into the environment rather than having them confined to South America where costs of growing them are lowest. They are now available for a shared ‘Flower Commons’ becoming a ‘Common Flower’ (see Bakke, 2012, pp. 15-16).

22 Strong objections have been raised by Krzysztof Ziarek (2004) and Sarah Kember (2006).

23 This generalization needs to be qualified. Bioartists such as Natalie Jeremijenko maintain that bioartists need to avoid the corporate biotech realm by maintaining an “impartiality” (Jeremijenko and Thacker, 2004, p. 11). Things may have changed for her since that time of writing.

24 I draw this insight from the inspiring works of Monika Bakke (2012) whose writings are consistently developing her concept of zoo-philia.

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