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## **Bodies within affect. : on practicing contaminating matters through bioart**

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### **Citation**

Wolodzko, A. A. (2018, November 13). *Bodies within affect. : on practicing contaminating matters through bioart*. Retrieved from <https://hdl.handle.net/1887/66889>

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Cover Page



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**Author:** Wolodzko, A.A.

**Title:** Bodies within affect. : on practicing contaminating matters through bioart

**Issue Date:** 2018-11-13

Agnieszka Anna Wołodźko

# Bodies within Affect

On Practicing Contaminating Matters through Bioart

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Cover: photo and design by Paweł Jankowski

Design and layout: Legatron Electronic Publishing, Rotterdam

Printing: Ipskamp Printing, Enschede

# **Bodies within Affect**

On Practicing Contaminating Matters through Bioart

## **Proefschrift**

ter verkrijging van  
de graad van Doctor aan de Universiteit Leiden,  
op gezag van Rector Magnificus prof. mr. C.J.J.M. Stolker,  
volgens besluit van het College voor Promoties  
te verdedigen op donderdag 13 november 2018  
klokke 13.45 uur

door

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# Abstract

Our view of the body as passive biological matter has been tested in the face of gene editing, stem cell research and tissue engineering. Now biotechnological research tells us that bodies may be dead and alive; they may be human and non-human; multiple and yet one; or they may host a person's entire biological information and yet still regarded as an object of commodification. The way we think about bodies, and the way we practice them, marks a particular tension in the way biotechnology treats our bodies. This book explores the conditions of thinking and practicing bodies within affect. The main presupposition of this research is that bodies are constituted by mutating and growing transformations that we are confronted with as a result of, in particular, body manipulations by the life sciences.

The contemporary biotechnological practices that manipulate the body have exposed the challenge of accepting and implementing the reciprocal relationship between the thought and practice of living bodies. In order to grasp the continuity of thought and practice of bodies, I focus on the concept of affect at work in Gilles Deleuze's philosophy, in particular, in his reading of Baruch Spinoza and Jakob von Uexküll. The notion of affect is used to understand the relational, contaminating materialities of our bodies, and the term "affect" confronts us with the actual implications of its practicing. I argue that affect, as a transformative relationality, is induced by bioartists and biodesigners who work with living bodies as an artistic medium. Therefore, looking closely at how artists use the relational capacities of bodies in their work, I search for the conditions for practicing bodies within affect. This book argues that practicing affect demands a different thinking logic that addresses material implications for the way we not only understand the body today, but also, and specifically, how we practice corporeal and incorporeal bodies within a wide socio-political and ethical sphere.

In order to change our way of thinking about bodies, the notion of *contamination* is employed as a way of studying and analysing relations between multiple fields and points of view. Contamination, rather than being in opposition to the idea of purity, is used as an affirmation of relations of transformation. The book is structured according to two main trajectories: 1) the study of bioart's practice of "conditioning contaminations," which allows us to map ways of practicing bodies within affect; and 2) an incarnation of this mapping within New Materialism and its selected topics, which are crucial in the search for the conditions for practicing bodies within affect; that is to say, a need for a human and non-human egalitarian reciprocity; an openness to the non-linguistic forms of meaning generation; the notion of agency and subjectivity outside the human dominion; the responsibility resulting from a "material contamination" that shapes thought and practice. Both trajectories of this book combine philosophical analysis, art encounters and reflection on life science practices. At the same time, they are disrupted and complemented by contaminants.

Contaminants disrupt each chapter and constitute a driving force in terms of what is important in our encounter with the transformative relations of bodies. Through disruption, contaminants are the stories of risky transformations that traverse not only bodies, but also disciplines and perspectives about bodies. Yet, each story grows unsettlingly close, becoming urgent and important for the fabulation of our mutual multibodies, leaving the reader not only with a contaminating way of thinking, but also with an understanding of the necessity of this relational thinking for the practice of bodies within affect.

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# Acknowledgements

One never writes alone. The writing process is marked by multiple encounters, often random and unexpectedly significant. I had the enormous fortune of having the most joyfully transformative encounters that I never expected.

I would like to thank my supervisor and mentor, Rob Zwijnenberg, for his belief in me and for his patient support, often in the face of my stubbornness. I will never forget my first class on bioart led by Rob – the world started to spin differently. I thank my co-supervisor, Rick Dolphijn, whose work has inspired this book, and Rosi Braidotti, whose seminar on Deleuze, taught together with Rick at the Deleuze Circle, Utrecht University, helped me to think with Deleuze. I express my gratitude to Ewa Gładkowska, who taught me that the world of art and philosophy are not separate, and for her valuable comments during the initial stages of writing this book. I also thank Amalia Kallergi, whose persistence in teaching hands-on ethics shaped my idea of the academic researcher I want to become.

An important turning point in my research was initiated by the reading group on Speculative Art Histories, led by Sjoerd van Tuinen, at the Witte de With Center for Contemporary Art in Rotterdam. It was here that my adventure with Deleuze and the amazing Deleuzians living in the Lowlands began. I thank Andrej Radman, for his multigalactic friendship and for his generous Ecologies of Architecture seminars at the Department of Architecture, TU Delft, where discussion about what matters never ceases. I also express my gratitude to Marc Baumeester, for trusting me with my first teaching Deleuze experience at the AKI, Academy of Art and Design in Enschede, and the Deleuze's Apprenticeship seminar participants with whom I pondered many of the thoughts in this book.

I thank my parents for raising me and teaching me what matters, giving me the impetus to write these words. And I thank Paweł Jankowski for his unconditional support, sacrifice and care throughout my multiple transformations. This book would never have happened without his love. I dedicate this book to him.



# Prologue

By reading this text you are incorporating it into your fleshy repertoire. During a focused semiotic transmission, more than thoughts change hands. Your basic physiology is altered as you read. Protein production is over – and under-regulated by intellectually reactive metabolites. Pride of knowledge, gullible acceptance, the deviant chuckle, these are not thoughts without physicality. There may be an avenue of interplay between communication and inheritance. If so, then this page is a transgenic vector, contagious, infective. Ideas received translate into proteins that have waiting receptors for novel gene expressions. Your children will have more or less bushy eyebrows if you continue reading. You may become too detached to breed! This is intergenerational selection, grammatological eugenics. You are now a transmemic GMO!<sup>1</sup>

An effect is first of all the trace of one body upon another, the state of a body insofar as it suffers the action of another body.<sup>2</sup>

We have knowledge of bodies only through the shadows they cast upon us, and it is through our own shadow that we know ourselves, ourselves and our bodies.<sup>3</sup>

The more we know about the porous and relational nature of our bodies, the more we sense how unpredictable and unexhausted the body's capacity for transformation is. Once we cracked and then learned how to edit the DNA code, the endless variations of the long chain of changes our bodies may go through, our ideas and ways of living, continue to multiply, rhizomatically. We can study the imperceptible parts of our bodies, change them, manipulate them according to our desires, or totally reinvent the body's purpose; yet, we do not seem to see these relations of change in action. What we encounter and perceive are already the results of these manipulations, formed into given states of bodies. We live in the game of shadows, but these are not the platonic ones that would refer to some transcendent world beyond the tangible. The shadows – noticeable effects – refer rather to a highly relational understanding of our way of being, of our bodies. When you eat, you not only

<sup>1</sup> Adam Zaretsky, "Viva Vivo! Living Art Is Dead," *Leonardo* 37, no. 1 (2004): 91.

<sup>2</sup> Gilles Deleuze, *Essays Critical and Clinical*, trans. Daniel W. Smith and Michael A. Greco. (Minneapolis, MN: University of Minnesota Press, 1997), 138.

<sup>3</sup> *Ibid.*, 141.

give energy and nutrition to your body, but you become with the food. When you breathe, your lungs not only perform the involuntary movement that provides oxygen to your blood, but you become with the environment that breathes with you. When you tweak the DNA in a body, you not only change this body's structure, but transform the practices and ideas of what it means to have and be a body, of what it is like to be living. Reading these words, you are not detached from them, you become with me, contaminated by my thoughts and, maybe, you will grow more bushy eyebrows like mine, one day.

However, if all is related, if all actions, or lack thereof, have implications for others, can transform others, the attempt to grasp these relations seems to be futile. After all, we are already changing, contaminating, transforming. Once you try to study those transformations in order to understand their implications, these relations are already something else in their movement of change. We are already immersed in affect – in relations of transformation, events of multiple, imperceptible encounters, like the microbes building your guts, enabling your daily digestions. How can we see and, more importantly, why would we need to see these relations of transformation? Is witnessing their results not enough?

If we are continuously contaminating each other, however, be it in the clean lab creating a new genetically modified organism (GMO), or in your kitchen at home, consuming my favourite Boston baked beans, what does it makes us – a GMO as our permanent state? Modifications, contaminations, happen imperceptibly; we can only notice the effects of it happening. We are thus prone to continuous doubt and uneasiness – you never know what a particular encounter will make you become! It seems that only in encounters with other bodies, when experimenting with these bodies, can we understand how our bodies live, how we change and how our change may influence further transformations. By bringing scientific practices, philosophical ideas and artistic creations into a state of mutual contamination, we can find a way to grasp a body's relationality. Incorporating thinking and narrating new practices might be a way of understanding our mutually mutating bodies.

I was thus confronted with bodies' relationality by three unlikely friends: biotechnology, which manipulates bodies on the molecular level; art, which creates and speculates with bodies' new sensations and perceptions; and philosophy, which searches for ideas and senses in those practices. These unlikely fellows – art, science and philosophy – awkward and often not without a mutual hostility, distrust and tension, became my companions in the quest for new contaminations.

To know more about our bodies, to be able to act, to be able to sustain transformation, requires new contaminations between practices, fields and habits. Therefore, conditioning and practicing contamination become a necessary starting point for understanding the relational nature of our bodies. Yet, how are we to survive the ongoing process of doubt and tension that living with contamination involves? More importantly, do we want to avoid or induce contamination? Is it even safe to contaminate? In other words, how can we live and practice the contamination of bodies within affect?





# Chapter 1

## Introduction

### 1.1 *Contaminant G* like a Gift

On 12 May 2017, as a part of the project “Trust Me, I’m an Artist”, a series of artistic events focused on the ethical frameworks for art working with living matter, the artists Jennifer Willet and Kira O’Reilly gave a performance entitled *Be-wildering*, in the Waag Society in Amsterdam. According to the organizers, the main goal of “Trust Me, I’m an Artist” “is to provide artists, cultural institutions and audiences with the skills to understand the ethical issues that arise in the creation and exhibition of artworks made in collaboration with biotechnology and biomedicine.”<sup>1</sup> Yet, Willet’s and O’Reilly’s performance provided something rather different.

Dressed in a white coat, tailored into a baroque dress, Jennifer Willet entered a scene of ethical examination next to Kira O’Reilly, who was wearing a green costume dress. Attached to Willet’s coat dress were bulbs, which seemed to function as Petri dishes, but also looked like nipples held by the pink flounces, containing samples from the many encounters that artist had experienced when wearing the coat. O’Reilly’s dress was dazzling and it was impossible not to look at her and her hat, with a majestic green feather [Figure 1]. The artists performed in front of an actual ethical committee consisted of experts in ethics and biotechnology, which judged whether their artistic pursuit could be fulfilled according to ethical norms.

Willet and O’Reilly began the event in a slightly mocking and cheerful tone. They started with a conversation, a narration of what was to happen and what their thought processes were when preparing for the event. Sipping wine and wandering around in front of the

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<sup>1</sup> Trust Me, I’m an Artist, “About – Trust Me, I’m an Artist,” <http://trustmeimanartist.eu/about/>, accessed 11 February 2017.

audience, they debated how to create ethically and whether trust is important within art: “Is trust important? Does it demand to be fixed or moving? On what is trust based? Maybe it is not about trust or distrust – [in art] you are more alert, ready for change. Not knowing what will happen is a condition rather than obstacle.”<sup>2</sup>

To the sound of O’Reilly’s dress shimmering, sequins sparkling, and sipping wine, the artists engaged in a calm conversation about the possibility of ethically evaluating art, and about their latest plan – to gather and spread contaminations, by collecting multiple samples and travelling through multiple spaces dispersing green glitter into the water and forests of Canada and Finland.<sup>3</sup>

Having filled the space with glitter narrations, the artists exited the scene of the investigation, giving the ethical committee time to decide whether their project was an ethical one.

The initial reaction from the ethical committee was annoyance at their grotesque play and ignorance of ethics: “they were playing us by not giving us the risk assessment.” In response, Willet said: “yes, but we gave something to you, we shared a gift with you.” But the ethics committee was only concerned with the dangers of contamination: “the danger is that the purpose [of the performance] is to contaminate.”<sup>4</sup>

The artists gave the gift of fabulation, of thinking about contamination and transformation. However, the ethical committee, attached to their fixed norms and protocols, could not grasp what had happened. Willet and O’Reilly were conditioning affect, while the ethics committee were trying to fix affect. In other words, the artists were conditioning the spaces of contamination: they were giving a gift of change, the possibility of transformation, while the ethics committee wanted to control, to manage the relations of change and direct the movement of change into a desired and stable form.

This art-ethics encounter seemed doomed to failure from the outset – how can you capture what, in fact, cannot be captured, but only lived through? How can one live with relations of transformation? Yet, with their creative, dazzling fabulations, the artists gave the gift of change – by creating the conditions of contaminations. It is for us to decide whether and how to use this gift.

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<sup>2</sup> Jennifer Willet & Kira O’Reilly, Performance *Be-wildering* by Jennifer Willet & Kira O’Reilly, 12 May 2017, Waag Society, Amsterdam “Events – Trust Me, I’m an Artist,” <http://trustmeimanartist.eu/events/>, accessed 18 June 2017.

<sup>3</sup> For a detailed explanation of the project see “Events – Trust Me, I’m an Artist.”

<sup>4</sup> Jennifer Willet & Kira O’Reilly, Performance *Be-wildering* by Jennifer Willet & Kira O’Reilly; conversation with the ethics committee, 12 May 2017, Waag Society, Amsterdam.



**Figure 1.** Jennifer Willet & Kira O'Reilly, *Be-wildering*, performance, 12 May 2017, Waag Society, Amsterdam. Photo by A. A. Wołodźko.

## 1.2 Thinking with Contamination

There is something symptomatic in the proliferation of references and applications of affect within the art and theory concerned with multiple materialities and incorporealities. 'Affect' has become a buzz word in the last decades of cultural, technological, visual, artistic, political, semiotic, but also biosemiotic studies concerned both with the life of bodies, their material ways of being and with explorations of their meaning outside any linguistic discourse.<sup>5</sup> As a consequence of its myriad use and definitions, the word affect has come to denote, above all, a particular onto-epistemological alternative, offering an image of the world that is based on embodied relationality and connectivity. Melissa Gregg and Gregory J. Seigworth summarize it as follows:

<sup>5</sup> See, for instance, Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation*, 1<sup>st</sup> edition (Durham, NC: Duke University Press Books, 2002); Brian Massumi, *Politics of Affect*, 1<sup>st</sup> edition (Cambridge, UK/ Malden, MA: Polity, 2015); John Protevi, *Political Affect: Connecting the Social and the Somatic* (Minneapolis, MN: University of Minnesota Press, 2009); Melissa Gregg and Gregory J. Seigworth (eds), *The Affect Theory Reader* (Durham, NC: Duke University Press Books, 2010); Marie-Luise Angerer, *Ecology of Affect* (Lüneburg: Meson Press, 2017).

Affect is born in in-between-ness and resides as accumulative beside-ness. Affect can be understood then as a gradient of bodily capacity—a supple incrementalism of ever-modulating force-relations—that rises and falls not only along various rhythms and modalities of encounter but also through the troughs and sieves of sensation and sensibility, an incrementalism that coincides with belonging to compartments of matter of virtually any and every sort. Hence, affect’s always immanent capacity for extending further still: both into and out of the interstices of the inorganic and non-living, the intracellular divulgements of sinew, tissue, and gut economies, and the vaporous evanescences of the incorporeal (events, atmospheres, feeling-tones).<sup>6</sup>

In particular, in view of the contemporary biotechnological practices that manipulate the body, such as gene editing, stem cell research and tissue engineering, our old views about the materiality of the body as a passive bearer of identity are challenged. For instance, what once was clearly considered as the inorganic and the organic, human and non-human, has now become blurred. Bodies may be dead and alive, may be human and non-human, may be multiple and yet one, may contain a person’s entire biological information and yet be commodified. Thus, the way we think about what bodies are, and how we practice those bodies has become inseparable with these biotechnological practices. Along with new technological possibilities came new desires: we hope to not only materially transform the structures of our bodies to such a degree that we will think and act differently, but we realize that our presupposition and ideas about possible ways of thinking about bodies directly shape these practices. Never has the reciprocal relationship between the thought and practice been so exposed. Affect has come to denote a contaminating force. It encompasses all that is material, bodily, biological, semiotical, psychological, cultural, visual, metaphorical, aesthetical, technological and ethical as interrelated dimensions of how bodies are.

However, the continuous urgency and demand for the identification and categorization of the possibilities to directly apply theoretical findings<sup>7</sup> seems to result in the notion of affect losing its transformative capacity and all that constitutes its novelty. Thinking with affect demands a different logic to thinking that has an actual, material implication for not only what we understand by the body today, but specifically, how we practice corporeal and incorporeal bodies. If the word affect is to be used to understand the relational, contaminating materialities of our bodies, we must rethink the actual matters of affect; that is: what are the actual implications of practicing affect?

In this sense, thinking with affect may offer ways not only of thinking about how to change bodies in biotechnological, philosophical and artistic practice, but it may actually change the practices of body manipulation. In this book, therefore, I argue that thinking with affect presents tangible problems that must be tackled.

<sup>6</sup> Gregg and Seigworth, *The Affect Theory Reader*, 2.

<sup>7</sup> For more on this argument, see the “Contaminant P” section in this chapter.

We need a particular methodology to study these tangible problems of thinking with affect. In order to map the actual changes in thought and practice that affect implies, we must go back to the philosophies of, in particular, Baruch Spinoza and Gilles Deleuze, for whom knowledge derives from the study of affect, i.e. the study of relations of bodies by mapping their implications. An urgent question in this regard, then, is how to map the implication of affect, and what happens after we acknowledge the affective nature of our bodies? In other words, how can we live with and practice affect? How can we live with contaminating encounters, and in what way might contaminating affect actually create new bodies and multiply new relations rather than destroy them? As performance by Willet and O'Reilly, *Contaminant G*, explores, how can we accept, but also give the gift of transformation?

The focus of this book is thus to map the conditions of how to live within affect – how to live within contaminating relationality so that the multiple relations that construct our bodies, us, can multiply and grow? In order to understand the importance of this question, I focus on the definition of affect that includes the notion of contamination. What is affect, and how to think with affect will be the subject of the second chapter. For now, it is crucial to think of affect as contamination.

There has been a long historical analysis of the sociology of the concept of contamination positioned against ideas of purity, clarity or objectivity, which this book cannot possibly do justice to. For instance, within the history of science, laboratory practices were based on the understanding of contamination as a threat to “pure medium cultivation,”<sup>8</sup> and therefore the need to control conditions. Contamination was juxtaposed with the sense of purity of and certainty about scientific findings, but also with the sense of autonomy and rationality of practicing scientific methods. For this reason, scholars such as Michel Foucault and, before him, Ludwik Fleck, the biologist and physician whose work on the collective understanding of knowledge production influenced Thomas Kuhn, argued that, as relational and contingent, contamination was a conceptual tool for understanding how our knowledge works.<sup>9</sup> As “defilement, pollution, infection,” and as the “blending of forms, words, or phrases of similar meaning or use so as to produce forms, word, or phrase of a new type,”<sup>10</sup> contamination denotes not only destruction, but also construction by multiplication, and the creation of new relations and new bodies, as well as ideas about those bodies.

<sup>8</sup> Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies*, 1<sup>st</sup> edition (Cambridge, MA: Harvard University Press, 1999), 167; See also Bruno Latour, Steve Woolgar, and Jonas Salk, *Laboratory Life: The Construction of Scientific Facts*, 2<sup>nd</sup> edition (Princeton, NJ: Princeton University Press, 1986).

<sup>9</sup> Although Ludwik Fleck did not write explicitly about contamination, the way he analysed the working of scientific fact was characteristic of relationality, collectivity and contingency, as opposed to individual reflection and the given fact of knowledge; for more on scientific fact see: Ludwik Fleck and Thomas S. Kuhn, *Genesis and Development of a Scientific Fact* (ed.), Thaddeus J. Trenn and Robert K. Merton, trans. Frederick Bradley (Chicago, IL: University of Chicago Press, 1981); Robert S. Cohen and Thomas Schnelle (eds), *Cognition and Fact: Materials on Ludwik Fleck*, 1986 edition (Dordrecht/ Boston, MA: Springer, 1986); Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (New York: Vintage, 1994).

<sup>10</sup> “Contamination, N.,” *OED Online* (Oxford University Press, n.d.), <http://www.oed.com.ezproxy.leidenuni.nl:2048/view/Entry/40057>, accessed 16 March 2017.

The fear of destruction has created a double bind, in particular, according to Bruno Latour, between science and the humanities. Science has pursued purification in the sense of accuracy of “subjectivity, politics, or passion.”<sup>11</sup> By contrast, within the humanities, there has been a struggle to maintain the purity of humanity – the notion of morality, dignity and subjectivity – and keep it free of any influence from “science, technology, and objectivity.”<sup>12</sup> Recently, however, another notion of contamination has emerged, i.e. that rather than denoting a threat to the “purity” of disciplines, their methods and findings, contamination calls for creation.

For instance, Alexis Shotwell, when writing about the social movements, their politics and ethics, argues that “we are in and of the world, contaminated and affected.”<sup>13</sup> As an extension of Latour’s belief that “we have never been modern,”<sup>14</sup> Shotwell argues that “we have never been pure.”<sup>15</sup> Arguing against the notion of purity, by affirming the omnipresence of contamination, she explains that: “To be against purity is [...] not to be for pollution, harm, sickness, or premature death. It is to be against the rhetorical or conceptual attempt to delineate and delimit the world into something separable, disentangled, and homogenous.”<sup>16</sup> In turn, Anna Lowenhaupt Tsing, who has written about the multiple relationalities of Matsutake mushrooms, argues that we should approach “contamination as collaboration,” through which a sum becomes bigger than its parts, and a gathering transforms into an event and a “happening.”<sup>17</sup> Importantly, encounters and relations are unpredictable within such understandings of contamination – we do not know in advance how bodies will influence or affect each other.<sup>18</sup> Hence, for Tsing, it is necessary to learn how to listen to stories and the narrations of multiple encounters as a method of being and living with contamination.<sup>19</sup>

I therefore use the word contamination as a conceptual tool for thinking about relations in a particular way. Contamination, rather than being in opposition to the idea of purity, is used as an ontological status quo. I posit that the notion of contamination is an affirmation of relations of transformation where tension and change is not just inscribed into the nature of our bodies, but welcomed. Rather than focusing on historical and scientific analysis, which, like the ethics committee, reveals the urge to fixed and manage relations, this study’s

<sup>11</sup> Latour, *Pandora’s Hope*, 18.

<sup>12</sup> *Ibid.*, 18.

<sup>13</sup> Alexis Shotwell, *Against Purity: Living Ethically in Compromised Times* (Minneapolis, MN: University of Minnesota Press, 2016), 10.

<sup>14</sup> Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1993).

<sup>15</sup> Shotwell, *Against Purity*, 13.

<sup>16</sup> *Ibid.*, 15.

<sup>17</sup> Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton, NJ: Princeton University Press, 2015), 27.

<sup>18</sup> *Ibid.*, 33.

<sup>19</sup> *Ibid.*, 37.

focus is on the practice of art and its encounters as multiple stories of contamination. Thus, narrating art's encounters within contamination is a way of studying the implications of affect, the shadows that envelop – yet, never exhaust – the imperceptible and dynamic nature of affect.

As the performance by Willet and O'Reilly exposed, contaminations are the condition of a creative approach to living matter. Robert Mitchell famously argued that bioart, or what he calls vitalist bioart,<sup>20</sup> which works with living matter, often using the tools of biotechnology and life science, not only creates conditions for contaminations, (which he calls “affects”), but also prolongs those contaminations (affects): “bioartworks [...] seek to extend the experience of affect rather than allowing it to resolve into situated perceptions and cognitions.”<sup>21</sup> Bioartists' use of tools from life science and art is not coincidental. By blurring the boundaries and looking for ways to expand the contamination between disciplines and perspectives of science and art, the practice of bioart with respect to life and living bodies becomes particularly focused on affect, even though artists may not explicitly refer to affect. Thus, the study of bioart's practice of conditioning contaminations becomes a necessary starting point when understanding the possibility of living and thinking with affect. I adopt Mitchell's ground-breaking analysis of affect in bioart in order to analyse affect as part of a wider socio-cultural struggle for thinking and living within transformative relations – within the contaminations of affect. By looking at how art and, in particular, bioart, conditions thinking and the practice of the relations of transformation, we can grasp what affect is and how we can live with it.

In order to think about bodies within affect, I use the notion of contamination not only as a conceptual tool for visualizing relational and mutually transformative materialities, but also as a way of writing and thinking. Here, contamination becomes relevant when no other method for practicing and thinking bodies within affect is possible. Thus, in this study, I create a way of thinking and analysing bodies within affect according to contamination. Moreover, the concept of contamination and its way of being, with its rhizomatic relationality, forms the structure of this book. In other words, contamination becomes a way of understanding and accessing bodies within affect. Thus, each chapter of the book begins with an encounter with a contaminant, be it blood, air, food, shit, bacteria, organs, multispecies, plants or chemicals, that constructs its own story and provides its own narration of living matter transformations. Importantly, each contaminant's story can be shifted easily between chapters and can be juxtaposed with each other by multiplying concepts and the problems they generate as they all share some strain of relation with each other. In this way, the reader may not only experience the tension that living with

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<sup>20</sup> Mitchell distinguishes within bioart works that seek transformation (vitalist) and works that merely reflect on biotechnological and biomedical realities (prophylactic). For further analysis, see Robert E. Mitchell, *Bioart and the Vitality of Media* (Seattle, WA: University of Washington Press, 2010), 11-12. I do not follow Mitchell's distinction within this book. The definition of bioart is elaborated on later in this chapter.

<sup>21</sup> *Ibid.*, 77.

contamination entails, but also learn how to map and condition affect's transformative capacities.

An important aspect of this approach is the style of writing adopted for this research. Since a contamination that changes or modulates bodies is hardly a safe phenomenon, it is important to reflect this sense of risk and tension in my writing as well. I therefore investigate bodies within affect using two trajectories, which pervade each chapter. The first is trajectory charged with personal experience and is used to write about encountering art's practice with bodies and the problems that arise when thinking about bodies' relationality. By contrast, the second trajectory has a scholarly and non-personal tone, which I learned as a philosophy student. Sometimes, these two trajectories are entirely separate, at others they intermingle, producing not only tension for the reader, but also revealing my struggle to grasp the ungraspable. Thus, these two trajectories are not complementary. They are not a universal overview of perspectives. Rather, I seek sustainable tension and disruption as a way to condition the search that belongs to living within affect.

Finally, contamination, as both a concept and a method, allows me to avoid a linear approach to discussing bodies within affect. Rather than juxtaposing the fields of science, art and philosophy and comparing and illustrating arguments about their multiple perspectives, I create encounters between them. In this way, contamination built on relationality and transformation shapes my methodology without a method when practicing contaminating bodies within affect.

### 1.3 *Contaminant P* like a Patent for Cancer

The particular discrepancy between the practice of affect and its control, between discovering the relations of transformation and managing these relations in order to achieve particular formations, is present in the practices of biotechnology. Take, for instance, the patenting of the human genome, which touches the very intimate and existential realm of what it means to have and be a body. Donna Dickenson reports that, according to common law, once a part of your body is separated from you, it is legally treated as waste and as not belonging to anybody [lat. *res nullius*].<sup>22</sup> Dickenson believes that this disposable attitude to body parts that have been detached from the body is due to the traditional distinction between a person and raw matter. Unlike a body part, persons cannot be owned as this would undermine the notion of human dignity.<sup>23</sup> However, as Dickenson states, recent biotechnological practices

<sup>22</sup> Donna Dickenson, *Property in the Body: Feminist Perspectives*, 1<sup>st</sup> edition (Cambridge, UK/New York: Cambridge University Press, 2007), 3.

<sup>23</sup> "Man cannot dispose over himself, because he is not a thing. He is not his own property - that would be a contradiction; for so far as he is a person, he is a subject, who can have ownership of other things. But now were he something owned by himself, he would be a thing over which he can have ownership. He is, however, a person, who is not property, so he cannot be a thing such as he might own; for it is impossible, of course, to be at once a thing and a person, a proprietor and a property at the same time," in Immanuel Kant, *Lectures on Ethics*, ed. J.

undermine the boundaries between what can be considered as a person and what is just a raw body part, which results making the body a much more fluid and hybrid phenomenon.

The scale and implications of the hybridity and relationality of the body as a result of biotechnological practices can be seen, for instance, within the phenomenon of human genome patenting and genetic testing, the most lucrative applications of biotechnological innovations.<sup>24</sup> Till 2013, it was common practice to patent the human genome once it had been isolated from the body. Even though genes are not an invention as such, their isolation from a body was considered an innovative practice and thus subject to patenting laws.<sup>25</sup> This resulted in an enormous biomarket, where, in the 1980s-1990s, till 2005, over twenty per cent of the human genome was patented in the US.<sup>26</sup> A patent is “a legal right granted to inventors by national governments to exclude others from making, using or selling their invention in a given country,”<sup>27</sup> and so, in this context, its function presupposes that parts of our own body are legally owned by companies and institutions.<sup>28</sup> Most importantly, gene patents are usually applied to all methods of their detection. This means that every test and tool involved in the management of a particular sequence are covered by patent laws. The patent thus reaches a very broad research area, and this may have consequences for future innovation and medical care. Since the main role of patents in the biotechnology that has induced genetic testing was to allow for private investment in research and development, biotechnology has transformed from a common good into a commodification and exploitation of the body.

Arguably, things have changed once the US Supreme Court banned the patenting of “natural” genes in the case of the Myriad Genetics Inc., the company that discovered the sequence and location of BRCA1 and BRCA1 – a gene mutation that increases the risk of ovarian and breast cancer: “A naturally occurring DNA segment is a product of nature and not patent eligible merely because it has been isolated, but cDNA is patent eligible because it is not naturally occurring.”<sup>29</sup> However, things become more ambiguous when we look not only at the differences, but also at the similarities between DNA and its copy, cDNA (complementary DNA). cDNA is “a type of a man-made DNA composition, which

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B. Schneewind, trans. Peter Heath, new edition (New York: Cambridge University Press, 1997), 157; Dickenson, *Property in the Body*, 5.

<sup>24</sup> Robert Cook-Deegan and Annie Niehaus, “After Myriad: Genetic Testing in the Wake of Recent Supreme Court Decisions about Gene Patents,” *Current Genetic Medicine Reports* 2, no. 4 (2014): 223

<sup>25</sup> David Koepsell, *Who Owns You: The Corporate Gold Rush to Patent Your Genes*, 1<sup>st</sup> edition (Chichester, UK/ Malden, MA: Wiley-Blackwell, 2009), 5-6.

<sup>26</sup> Kyle Jensen and Gloria Bevan, “Intellectual Property Landscape of the Human genome. (Intellectual Property),” *Science* 310, no. 5746 (2005): 239-240, doi:10.1126/science.1120014.

<sup>27</sup> Yann Joly and Patricia N. Tonin, “Social, Ethical and Legal Considerations Raised by the Discovery and Patenting of the BRCA1 and BRCA2 Genes,” *New Genetics and Society* 33, no. 2 (2014): 170.

<sup>28</sup> Koepsell, *Who Owns You*; Donna Dickenson, *Body Shopping: Converting Body Parts to Profit*, 1<sup>st</sup> edition (Oxford: Oneworld Publications, 2009).

<sup>29</sup> Supreme Court of the United States Syllabus Association for Molecular Pathology, *Certiorari to the United States Court of Appeals for the Federal Circuit No. 12-398*. Argued April 15, 2013. Decided 13 June 2013, [http://www.supremecourt.gov/opinions/12pdf/12-398\\_1b7d.pdf](http://www.supremecourt.gov/opinions/12pdf/12-398_1b7d.pdf), accessed 7 February 2015.

is made in a lab with an enzyme that creates DNA from RNA template.”<sup>30</sup> Not naturally occurring, and structurally and functionally different from DNA, cDNA thus complies with the patent law. Nevertheless, some critics argue that, despite its structural and functional difference, which allows for the further research, the copy (cDNA) still holds exactly the same information as the original (DNA).<sup>31</sup> Moreover, because cDNA is not distinct from the methods it is extracted with, there is no specification of how much intervention is actually needed in order for the gene to be legally patented, since mere simple separation from the body is no longer a boundary.<sup>32</sup>

Despite the lack of boundaries and clear definitions of what a body’s natural state is and what its manipulated state is, Myriad, (like other companies involved in human gene patenting), practices what is now called *personalized medicine*. Bodies are practiced as autonomous and fixed identities, independent from collective relations.<sup>33</sup> As Dickenson argues, personalized medicine deliberately positions itself against *we medicine*, emphasising individual responsibility and care, rather than a collective and relational understanding of the way our bodies are. We witnessed the power of individual choice when the American actress Angelina Jolie announced that she had undergone a double mastectomy due to the presence of the BRCA gene in her body. This was in 2013, just before the Supreme Court decision in the Myriad case and the actress’s experience provoked a public debate about the necessity of testing for the cancer gene. However, the media conveniently failed to mention the patent that applied to the BRCA gene, and just how expensive the test to detect it was (in 2013, the test cost between US\$3,000 and US\$4,000).<sup>34</sup> Moreover, the decision to undergo the mastectomy – which for the average woman does not end with a full breast reconstruction as it did in Jolie’s case – was portrayed as being a woman’s – a mother’s – individual choice. The discussion of the elective surgery largely ignored any discussion of the financial, political or social situation of women, or of the industry involved in performing these tests.

Importantly, in order for the testing to be accurate and certain, a large database of the variation of this mutation is needed. You need “we medicine in order to perform a successful me medicine.”<sup>35</sup> In other words, to be accurate, any medicine depends on a range

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<sup>30</sup> Joly and Tonin, “Social, Ethical and Legal Considerations Raised by the Discovery and Patenting of the BRCA1 and BRCA2 Genes,” 176.

<sup>31</sup> Kristen L. Burge, “Personalized Medicine, Genetic Exceptionalism, and the Rule of Law: An Analysis of the Prevailing Justification for Invalidating BRCA1/2 Patents in Association of Molecular Pathology v. USPTO,” *Washington Journal for Law, Technology & Arts* 8, no. 4 (2013): 514.

<sup>32</sup> Cook-Deegan and Niehaus, “After Myriad,” 224.

<sup>33</sup> *Ibid.*

<sup>34</sup> Gayle Sulik, “Opinion: Why Jolie’s Cancer Test Costs so Much - CNN.com,” Special to CNN, <http://www.cnn.com/2013/05/24/opinion/sulik-patented-genes/index.html>, accessed 21 May 2015; Paul Harris in New York, “Angelina Jolie’s Cancer Decision Highlights Row over Genetic Technology,” *The Guardian*, <http://www.theguardian.com/film/2013/may/19/angelina-jolie-cancer-row-genetic-technology>, accessed 21 May 2015.

<sup>35</sup> Donna Dickenson, *Me Medicine vs. We Medicine: Reclaiming Biotechnology for the Common Good*, 1<sup>st</sup> edition (New York: Columbia University Press, 2013), 47.

of relational practices and multiple bodies from various social, political and biological states. Any distinction, therefore, between “me” and “we” medicine is an artificial one. Medical practice has exposed how “me” medicine has already been “we” medicine. The tangible danger, however, is that these relational practices become veiled by the abstract categories of individuality and autonomy. In other words, while we are already living within affect, and are already practicing affect’s contaminations and its multiple relations and implications for various spheres of living bodies, we have never really changed our logic with regard to affect.

In the case of Myriad, while, in principle, researchers, share their genome database in order to provide an exchange of information for the common good and to promote innovation and accurate medical care, fear of competition led the company to stop contributing to the data already in 2004. It has also stopped publicising new information about variations. As a major performer of tests for the BRCA gene, Myriad has thus significantly restricted research on breast cancer. The company’s self-interest, clothed in a policy of personalized medicine has stopped the flow of data and, therefore, causing less accurate medical care.<sup>36</sup> What is worse, after the US Supreme Court decision of 15 April 2013, Myriad filed a number of lawsuits against laboratories that had started to offer the BRCA test more cheaply.<sup>37</sup>

What we learn from the BRCA case, is that by failing to change the logic of thinking about the bodies and as a result of its perpetuation of the belief in the autonomy of bodies, despite their obvious dependence on bodies’ relationality, the gene patenting industry has created even stronger hierarchies among bodies. The industry’s policies have enacted a strong belief in determinism, ascribed to DNA within the practices of biotechnological, economic and political application. The idea of the autonomous body is stronger than the actual matters of practice and relations that construct the body. Such practice of the body has preserved the nature/culture divide in a bizarrely paradoxical way.

The US Supreme Court’s decision perpetuates a belief in the exclusion of nature from any economic-political spheres. As long as something does not occur in “nature”, it can be patented. However, as shown in the case of Myriad, the copy (cDNA) of DNA that is to be patented holds exactly the same information as the original (DNA). The border between what occurs naturally and culturally, what is original and what is a copy, is thus blurred. Without the “original” DNA there would be no cDNA in the first place. Moreover, what is considered as artificial and therefore ready for manipulation and commodification, materially influences and transforms what we consider to be “natural”. The promise of cure and treatment that has justified the privatization and monopolization of research, ultimately influences our own bodies and lives. Patented genes sequences do not regard a particular body, but “the body”. Patents have a universal function, which, in turn, incorporates all

<sup>36</sup> Joly and Tonin, “Social, Ethical and Legal Considerations Raised by the Discovery and Patenting of the BRCA1 and BRCA2 Genes,” 177-78.

<sup>37</sup> Cook-Deegan and Niehaus, “After Myriad,” 227.

our bodies under its law. Once you have a breast cancer, part of you, what you think of as the “natural” you, belongs, in practice, to the corporation. The artificial divide between the “state of nature” and man-made practice does not respond to our bodies, which are an entanglement of living matter and practices.

Furthermore, the Myriad case is also a striking example because it shows the consequences of our lack of understanding that biotechnology has a real material impact on our social and political life. Here, the idea of personhood and human dignity cannot do justice to the scale of novelty and unpredictability of the biotechnological world. Biobanks, which are the modern equivalent of surveillance and property, have resulted in: commodified cell lines, such as those in the Henrietta Lacks legal case,<sup>38</sup> promises of regenerative medicine via new methods that transform a cell from an adult body into any other type of a cell, and CRISPR genome editing, which makes the idea of designer babies not just futuristic speculation, but a scientific possibility.<sup>39</sup> Indeed, these new biotechnological inventions have undermined any doubt about the influence that biotechnology already has in shaping our lives.

These phenomena are not just the concern of bioethical committees and economic policies, they directly touch the multiple political, social and cultural realms of our existence. Ingeborg Reichle called the unprecedented power inherent to the use of biotechnology “bottom-up eugenics”, which is not based directly on a socio-cultural idea and narration, but rather the market and profit.<sup>40</sup> As Robert Zwijnenberg argues, biotechnology inevitably correlates with such problems as, for instance, human enhancement, posing not only ethical and legal problems, but forcing more philosophically and culturally varied questions and attitudes, i.e. “who and what do we want to be as humans, and who and what do we want to become?”<sup>41</sup>

Biotechnological innovations that allow us to manipulate our bodies construct economic-social realities that do not respond to disciplinary divisions. Economic and political demands are strongly entangled with scientific findings, technologies and their agencies, which, in turn, inevitably influence social and cultural, individual and the population’s practices, as well as our lives and bodies. However, as the Myriad case shows, once these multiple entanglements are applied according to the traditional beliefs in autonomy, individuation and personalization, which do not respond to the relational nature of phenomena, we enter

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<sup>38</sup> Henrietta Lacks, an African American woman born in Virginia, United States of America, died in 1951, aged 31, of cervical cancer. Her cells were taken from her body without her or her family’s consent. The cells were then commodified into a cell line known as the HeLa cell. This gave rise to over ten thousand patents, which have been used extensively in medicine and research ever since. However, in 2013, the Lacks family won some right to acknowledgment. See “Lacks Family,” *Lacks Family Website*, <http://www.lacksfamily.net/>, accessed 21 May 2015. See also Rebecca Skloot, *The Immortal Life of Henrietta Lacks* (New York: Broadway Books, 2011).

<sup>39</sup> Heidi Ledford, “CRISPR: Gene Editing Is Just the Beginning,” *Nature News* 531, no. 7593 (10 March 2016): 156, doi.org/10.1038/531156a.

<sup>40</sup> Ingeborg Reichle, *Art in the Age of Technoscience: Genetic Engineering, Robotics, and Artificial Life in Contemporary Art*, preface Robert Zwijnenberg, trans. Gloria Custance, 1st edition (Vienna/New York: Springer Vienna Architecture, 2009), 26.

<sup>41</sup> Robert Zwijnenberg, “Biotechnology, Human Dignity and the Importance of Art,” *Teoria* No. 1(2014), pp. 131-148.

into the realm of utopian beliefs in purity and clear-cut boundaries between species and disciplines. For instance, transhumanists' desire for designer babies and perfect humans,<sup>42</sup> fuelled by an unquestioning use of technology, is just one among many examples of using relationality not as an ontological way of being, but as a means for strengthening the fixed ideas about our bodies. We already live and practice affect, that is why, if we do not think and act according to its dynamic nature, we create even sharper dualisms, polarizations and hierarchies. It is therefore time to map these material and relational ways of understanding. It is time to map bodies within affect, in order to meet the challenges of the biotechnological future. The question is, how to do that? How can we relationally practice the relational nature of our bodies? In other words, how do we make matters of affect matter?

## 1.4 *Contaminant E* like an Embryo's Little Wings

One of the first classes on bioethics in practice that I attended was conducted by Robert Zwijnenberg and Amalia Kallergi. It was titled *Who Owns Life* and involved the bioartist Boo Chapple. This lecture was part of a series of hands-on bioethics classes initiated by Zwijnenberg at Leiden University since 2006, gathering together students from various faculties such as literature, history, philosophy, law and life sciences. The first class of the series was with Adam Zaretsky and his project *VivoArts: Art and Biology Studio – Wet Lab Practice and Bio-Art Pedagogy*, which set the tone and experimental nature of the subsequent lectures.

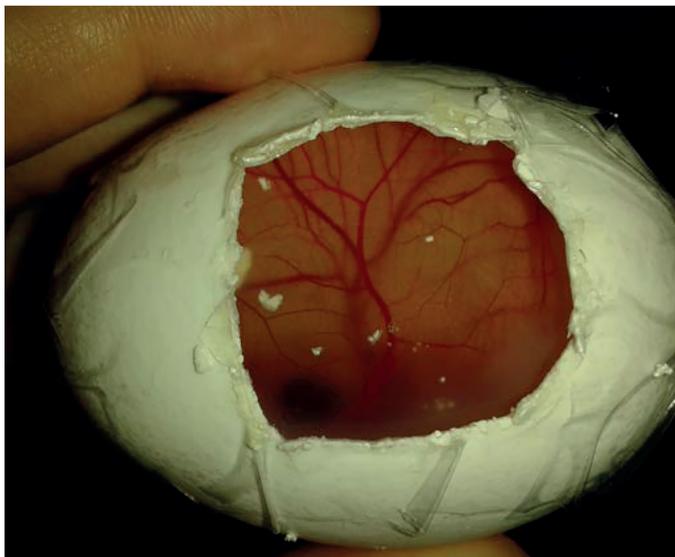
In the class with Chapple, we were asked to join a performance to baptise chicken egg embryos, following a protocol of 'windowing', as is practiced in developmental study. Chapple explained that the embryos never reach their adult stage and so it might be a humanitarian act to baptise them. I remember clearly how most of my presuppositions about ethics and morality collapsed and appeared meaningless once I was asked to use my hands and "get them wet" in the vast matters of the materiality of bodies, in order to understand what is actually happening in biotechnology. My "humanistic" idea about life and the living body was insignificant, and I was overwhelmed by the sense of powerlessness I felt when dealing with issue of body manipulation.

The usual procedure for windowing an egg involves making a whole in the shell so that you can observe the inside without significantly harming the embryo. First, you remove the egg from the incubator into an environment that has a constant temperature of 37 degrees and 60% humidity. Before an egg can be windowed, it must be sterilized using 70% ethanol. You carefully make a cut in the egg shell following the given instructions about the size,

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<sup>42</sup> "Humanity+, *Philosophy*, <http://humanityplus.org/philosophy/philosophy-2/>, accessed 25 August 2017.

angle and pressure necessary to make an opening [Figure 2]. After your study, you must close the shell with plastic tape and return the egg to the incubator.<sup>43</sup>



**Figure 2.** Windowed egg with an embryo.

Photo by A. A. Wołodźko

In my case, making the incision at the proper angle and in the correct place went smoothly and according to the rules. I and my fellow students performed the experiment with a careful precision and accuracy, and felt proud to have carried out the procedure successfully. Everything changed, however, when the students were able to see a chicken embryo inside. The strange fulfilment of the desire to see and explore what is hidden overwhelmed the entire group of quasi-scientists. Students of law, art history, literature and philosophy, wearing white coats that seemed to shield them from any moral judgement, were poking and prodding, extracting the yolk fluid, laughing and cheering. Some baptized the embryo by squirting it with water from a syringe. Unable to connect their material discovery with fixed ideas and identities, they were playing with the embryos. At the end of the session, all the eggs were thrown into the biohazard trash box. I also threw away mine.

Intriguingly, before the experiment, Chapple carefully explained what the embryos would look like in their developmental stage, and outlined what the windowing procedure involves, and how she sees the baptism of those embryos as a humane act since they would be exterminated before reaching an adult stage. Students were then asked whether they still wanted to participate. We must have been so bored with the usual ethics classes, that we all enthusiastically put on our white coats, ready for our first experience with living matter. The only student that refused to take part was a third-year life science student, who was

<sup>43</sup> Matthew J. Korn and Karina S. Cramer, "Windowing Chicken Eggs for Developmental Studies," *Journal of Visualized Experiments: JoVE*, no. 8 (October 1, 2007), doi.org/10.3791/306.

taking the classes to learn about the ethics of biotechnological manipulation. She told us that she had joined the classes to learn more than her department was able to offer her. I was intrigued when she explained, after the class, that this experiment was useless and unethical. According to her, the performance of baptising the windowed egg served no purpose in terms of developmental learning and was just some artistic project.

I took the chicken embryo that had been ascribed to this girl home. I felt it would be a pity to throw away it like that, and I was also feeling guilty about destroying the one I had opened so easily. I had an idea about performing the same experiment in a different environment. I wanted to see what would happen in a space like my home kitchen. I suspected that the place and the circumstances influence the experiment's findings. Therefore, when I arrived home, I put the egg in a fridge. The next day, I performed the same experiment, this time with the aim to extract the embryo and keep it in the alcohol, as a reminder of this baptism-performance experience. However, I had not anticipated my reaction when performing exactly the same act as the day before, but without my white coat, laboratorial environment, teachers and others who were doing exactly the same. I knew it would be different, yet I did not foresee that I would actually be shaking on seeing that this eleven-day-old embryo was not a mass of wet yolk, but a little being, which already had the form of a chicken [Figure 3]. I could see the beak, little wings and legs. I found myself thinking that this whole experiment was pointless and even cruel. I realized that, despite myself, I had been driven by immediate emotions and moral judgement: because I could recognize and identify the yolk as a chicken, I was able to question my action, I was able to feel responsible. My moral position and even empathy, was thus only driven by my ability to identify and to categorize according to a given understanding of what is a living being that deserves life. I was caught in my need for anthropomorphising; my morality was anthropocentric. Only then did I understand a little better what Boo Chapple had tried to show us.

## 1.5 New Material Contaminations

We know that all knowledge and meaning must have context; yet, we act and learn in a non-contextual way. Secured within our disciplinary boundaries, we have no chance to experiment with other perspectives, contaminations and their challenges. Moreover, within the short hands-on bioethics classes, I had soon come to realize that we actually have no methodological tools to address the problems that we were being confronted with, such as the commodification of living bodies in a more situated, relational and processual character. We take context, its material tools and methods for granted, instead of inquiring about what their role is in the formation of meaning. Above all, after many discussions with the students and teachers of the *Who Owns Life* course, it gradually became obvious to me that we do not have the semiotic tools to address this contaminated, local and embodied

production of meaning. We were all approaching the dilemmas from the closed perspective of focusing on human subject and human-like identities, fixed laws and disciplinary boundaries. We thus seemed to lack the understanding that our bodily state, habits and presuppositions significantly influence what we take as knowledge. We do not know how to relate with radical difference, how to act in a situation where perspective and habits are contaminated, or how to approach something that we cannot categorize and compare to what we already know. Instead of following fixed rules and established methods when studying the relationality of bodies and its practice, there seems to be an urgent need to implement relationality and contamination as a valid material understanding. This need results in a shift from the priority of epistemological fixation on truth, to an onto-ethical attentiveness about how we select what is important and how we deal with consequences of such choices.



**Figure 3.** Embryo from windowed egg, kitchen experiment.  
Photo by A. A. Wołodzko

Annemarie Mol described this shift in philosophical thinking as a change of question, from: “how can we be sure?” to “how to live with doubt?”<sup>44</sup> In her analyses of the body in contemporary medical practice, she moves from epistemology, which is concerned with

<sup>44</sup> Annemarie Mol, *The Body Multiple: Ontology in Medical Practice* (Durham, NC: Duke University Press Books, 2003), 165.

the accuracy of our representations of reality, towards a more ontological perspective, understood as a focus on how the objects of our study are enacted in practice. In this sense, Mol is arguing for the multiplication of reality: “objects come into being – and disappear – with the practices in which they are manipulated. And since the object of manipulation tends to differ from one practice to another, reality multiplies.”<sup>45</sup> Her question is thus focused on relations, how the objects of our study – in her case, bodies in medical care – are related to each other, while bearing in mind that each multiplied body is as real as any other. In that sense, for Mol, knowledge is a matter of ontology understood as practice and enactment, rather than representation and truth. As such a practice of multiplicity, constructed meanings are uncertain, fragile and often volatile.

This transitory character of the multiple notion of the body, has been exercised continuously in Zwijnenberg’s classes. Rather than discredit such generation of meaning due to its epistemologically uncertain nature, students were forced to confront the question of how to take it seriously. The challenge to take seriously what is elusive and partial, consequently, constructs a highly ethical position: “somehow we must learn to understand how it is that given the possibility, we can still act.”<sup>46</sup>

The affirmative approach to doubt, understood in terms of a volatile notion of the meaning of bodies, is what Donna Haraway famously defines as situated knowledge. She transforms the traditional idea of objectivity, based on Thomas Aquinas’s corresponding notion of truth and the idea of disengagement of the subject from the object of study, into a more partial perspective: “Objectivity is not about disengagement but about mutual and usually unequal structuring, about taking risks in a world where “we” are permanently mortal, that is, not in “final” control.”<sup>47</sup> Partiality, unlike relativity, which, she argues, is only a mirror of the representational idea of truth, is grounded in responsibility and care. Haraway argues that a situated approach to knowledge demands an ontological shift: it “requires that the object of knowledge be pictured as an actor and agent, not as a screen or a ground or a resource.”<sup>48</sup> As shown in Zwijnenberg’s lab classes, this involves introducing a sense of risk and experimentation to the humanistic reflection that acknowledges responsibility and care in the face of human, but also non-human multiple agencies. The debate around the body is transformed here into a more material logic that involves what, in academia, has recently come to be known as “a new material thinking”.

“New materialism” grew from an understanding that our bodies must be approached in terms of relational thinking. Scholars such as Rosi Braidotti, Elizabeth Grosz or Stacy Alaimo have been arguing that the practice of relational thinking about bodies is fostered, in particular, by the contemporary biotechnological practices that make biology and life

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<sup>45</sup> Ibid., 5.

<sup>46</sup> Ibid., 165.

<sup>47</sup> Donna J. Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies* 14, no. 3 (1988): 595-596.

<sup>48</sup> Ibid., 592.

the main focus of humanistic concerns.<sup>49</sup> New materialist thinkers thus urge rejecting the epistemological dualism of mind and body as well as the idea that living matter is subordinate and passive.<sup>50</sup> By engaging in an analysis of life as a non-human and non-organic generative force, new materialist scholars force us to rethink the notion of matter and life within philosophical, cultural and political studies, in a more egalitarian, self-critical and non-essentialist way.<sup>51</sup> This means that, rather than understanding living bodies in terms of fixed properties, they understood bodies as being composed of relations and processes, dynamic, folding, continuously contaminating each other. New materialism thus breaks with the a-biological perspective on the body within the humanities, and shifts the discursive analysis to highly relational thinking.<sup>52</sup> It calls for a readdressing of the question of knowledge production, which is not a representation of the world, but rather a relational, ethological and shared process of meaning construction beyond anthropocentrism. Because of that new focus on meaning production, recently, Jakob von Uexküll's notion of *umwelt* and relational understanding of meaning production in the animal world has received much attention. I will explore his ideas in the context of material notion of meaning later. For now, it is important to note that the questions that have been raised mainly within biosemiotics and zoosemiotics,<sup>53</sup> have become part of new materialism and reinforce a discussion on the material and environmental notion of meaning production within wider socio-cultural and political study.

Importantly, new material non-anthropocentrism as a mode of thought is not about a sudden deprivation of the human perspective. After all, as humans, we have a particular body that determines how and what we can experience. The focus is rather on the particular materiality of this experience that implements various non-dualistic and collective understandings of the way we live and how we gather our knowledge. In that sense, it is much more than a non-dualistic shape of methods and values. Rather than discursive deconstruction of the human as a normative idea and a methodological paradigm, it is about a material and relational approach to already existing concepts such as the body, life and matter.

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<sup>49</sup> Elizabeth Grosz, *The Nick of Time: Politics, Evolution, and the Untimely* (Durham, NC: Duke University Press Books, 2004); Rosi Braidotti, *The Posthuman*, 1<sup>st</sup> edition (Cambridge, UK/Malden, MA: Polity, 2013); Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material Self* (Bloomington, IN: Indiana University Press, 2010).

<sup>50</sup> Diana Coole and Samantha Frost (eds), *New Materialisms: Ontology, Agency, and Politics* (Durham, NC/London: Duke University Press Books, 2010); Rick Dolphijn and Iris van der Tuin, *New Materialism: Interviews & Cartographies* (Ann Arbor, MI: MPublishing, University of Michigan Library, 2012).

<sup>51</sup> Donna J. Haraway, *When Species Meet* (Minneapolis, MN: University of Minnesota Press, 2007); Cary Wolfe, *What Is Posthumanism?* (Minneapolis, MN: University of Minnesota Press, 2009); Joanna Zylińska, *Bioethics in the Age of New Media*, 1<sup>st</sup> edition (Cambridge, MA: MIT Press, 2009); Rosi Braidotti, *Transpositions: On Nomadic Ethics* (Cambridge [etc.]: Polity, 2006); Braidotti, *The Posthuman*, 2013.

<sup>52</sup> Braidotti, *Transpositions*; Braidotti, *The Posthuman*, 2013; Roberto Esposito, *The Third Person*, 1<sup>st</sup> edition (Cambridge: Polity, 2012); Protevi, *Political Affect*, 2009; Alaimo, *Bodily Natures*.

<sup>53</sup> See, for instance, Wendy Wheeler, *The Whole Creature: Complexity, Biosemiotics and the Evolution of Culture* (London: Lawrence And Wishart Ltd, 2006).

Rosi Braidotti explains this in terms of the radical distinction between posthumanism and postanthropocentrism, where the former denotes disciplinary problems within philosophy, history, cultural studies and what she describes as classical Humanities, and the latter embraces transdisciplinary attentiveness and relations between “science and technology studies, new media and digital culture, environmentalism and earth-science, biogenetics, neuroscience and robotics, evolutionary theory, critical legal theory, primatology, animal rights and science fiction.”<sup>54</sup> In other words, postanthropocentrism as a non-anthropocentric shift in thinking did not grow from anti-humanist, deconstructive premonitions, but rather from affirmative, material and transdisciplinary necessity for a more relational and vital understanding of our various ways of being, knowing and acting. Above all, it involves a semiotic turn that finds construction of meaning in various human and non-human, organic and inorganic agents and their reciprocal relationality and interactions.

The entanglements and relations between science, culture, nature become, or rather always have been, so varied and complex that we have finally realized that we must change our approach. While recent decades have seen the rise of the actor-network theory within the social sciences, which presupposes that everything is universally and homogeneously connected, new materialists think in terms of contaminations; thus, for them, connections are everything. There are ethical and ecological consequences to such a position that focuses on particular relations rather than the universality of interconnectedness. While Timothy Morton argues that ecology starts with a radical openness to everything,<sup>55</sup> I adopt new materialist thought and propose to change the logic of thinking. Thinking with bodies within affect demands a different focus. Thinking with affect is initiated by an attentiveness to particular differentiations in relations – each relation contaminates, changes and transforms bodies in a radically different way. The challenge is thus how to relate so that we can continue to practice contaminations?

Moreover, according to Joanna Zylińska, because we are all entangled there is a requirement of responsibility.<sup>56</sup> Importantly, however, as Alexander R. Galloway and Eugene Thacker noticed, the idea of connectivity is already embedded within “a new management style, a new physics of organization that is real as pyramidal hierarchy.”<sup>57</sup> Regarding the example of networks in cybernetics, Galloway and Thacker explain how a network, as a system of interconnectivity, is always ruled by protocols – immanent expressions of control. The main consequence of uncritical application of network systems in ecological and ethical debate is the treating of living bodies and biology, in general, as such an information network system, in which life is something to be managed and instrumentalized. In this way, biotechnology found an easy route through the ethical committees, for instance, since,

<sup>54</sup> Braidotti, *The Posthuman*, 2013, 57–58.

<sup>55</sup> Timothy Morton, *The Ecological Thought*, (Cambridge, MA: Harvard University Press, 2012), 1.

<sup>56</sup> Joanna Zylińska, *Minimal Ethics for the Anthropocene* (Ann Arbor, MI: University of Michigan Library, Open Humanities Press, 2014).

<sup>57</sup> Alexander R. Galloway and Eugene Thacker, *The Exploit: A Theory of Networks* (Minneapolis, MN: University of Minnesota Press, 2007), 29.

as another type of network, the body became an instrument for enframing the information system. As such, life and the body became easy to manufacture,<sup>58</sup> as the earlier example of gene patents showed. Although Zylinska signals that her new minimal ethics is based on differentiations and the dynamism of connections – and, in that sense, is “non-systemic” and “non-normative”<sup>59</sup> – in order for her plea to be realized in practice, stronger emphasis on the understanding of partiality and its actual consequences becomes crucial.

When we emphasize partial relations – local or global, yet always already situated in a particular context – then these relations carry a profound strength and consequences. They gain not only a particular politico-historical scale, but also have onto-ethical implications. Suddenly, relations determine our very existence. In that sense, the emphasis that relations are everything, rather than that everything is related, becomes crucial. We realize that our actions produce new relations, which, in turn, trigger new sets of relations and new problems. The question of ethics is thus the question of material entanglements, which generate situated forms of knowledge, material contaminating realities of living and practicing affect that we create and are created by. For this reason, in my study of bodies within affect, I adopt Nina Lykke and Anneke M. Smelik’s material sense of meaning, which they formulate as “the new material-semiotic.” As they argue, “we must develop scientific thinking at the intersection of different domains and learn to think in terms of processes and interrelations.”<sup>60</sup>

The limitations of the research that follows does not allow me to do justice to the complexity and scope of the material semiotics that grew from the material feminist theories of such scholars as Rosi Braidotti, Elizabeth Grosz, Donna Haraway, Claire Colebrook, Jane Bennett, Karen Barad and Stacy Alaimo.<sup>61</sup> My reading of their work thus focuses on those aspects of new materialism that are important to my study of contaminating bodies within affect, namely:

- a need for a human and non-human egalitarian reciprocity;
- an openness to the non-linguistic forms of meaning generation;
- the rethinking of the notion of life and agency outside the human dominion;
- the awareness of a “material contamination,” which denotes that, because matter becomes inseparable from meaning, each encounter is intrinsically ethical.

The various influences and points of reference of new materialism have created a powerful conceptual basis for thinking about bodies. This book is a continuation of new material thought and its struggle to find new material methodologies. The main questions of new

<sup>58</sup> Ibid., 48.

<sup>59</sup> Zylinska, *Minimal Ethics for the Anthropocene*, 21.

<sup>60</sup> Anneke M. Smelik and Nina Lykke (eds), *Bits of Life: Feminism at the Intersections of Media, Bioscience, and Technology* (Seattle, WA: University of Washington Press, 2008), xiv.

<sup>61</sup> See Stacy Alaimo and Susan J. Hekman, *Material Feminisms* (Bloomington, IN [etc.]: Indiana University Press, 2008); Iris van der Tuin, “New Feminist Materialisms,” *Women’s Studies International Forum* 34, no. 4 (July 1, 2011): 271–77.

material thinking will be analysed here with regard to how to practice the material way of thinking within affect. The main entry point for this search is the tension between three unlikely friends that deal with contaminating matters: art, science and philosophy.

## 1.7 Bioart's Gift

Tension between art, science and philosophy was of particular interest to Deleuze and Guattari for whom all three constitute and define thought.<sup>62</sup> I employ here their understanding of the relationship between art, science and philosophy, which carries a particular tension: “the three thoughts intersect and intertwine but without synthesis or identification.”<sup>63</sup> Each field is different and yet related to the other by challenges and hesitations. Nevertheless, for Deleuze and Guattari, it is the particular nature of art that produces affect. Art generates relations of contaminations, it produces those relations by initiating transformations and movements. Both Deleuze and Guattari see art as “a compound of perceptions and affects”;<sup>64</sup> art preserves affects, but, they argue, “if art preserves it does not do so like industry, by adding a substance to make the thing last.”<sup>65</sup> Preservation does not fix things or capture them in their instability. On the contrary, art preserves that which cannot be captured, i.e. what belongs to a moment, but not to identities and particular bodies. What art preserves, according to Deleuze and Guattari, are affects and percepts, where affects are understood not as feelings but transformations of feeling, and percepts not as perceptions but transformations of ways of seeing. I argue, therefore, that the practice of art has already established a particular way of thinking with affect, which conditions how to practice and produce transformations, modulations of bodies. Thus, by studying the particular methods of art's preservation of affect we can come closer to understanding the vast implications of affect.

Following Gilles Deleuze, I argue that art not only works according to affect, i.e. according to the relational and transformative way of being of bodies, but it produces new affects, new relations of contaminations. Nevertheless, in this book, I have deliberately selected bioart case studies which undertake the problems and implications of bodily manipulations in practice. It is important to note that Deleuze never wrote on bioart or art that uses living organisms as its medium, although artists' use of plants and animals in their practice – and not only as a point of reference – was already documented first in the 1930s and later in the 1970s.<sup>66</sup> Moreover, my study of the relation between art and living

<sup>62</sup> Gilles Deleuze, Félix Guattari, *What Is Philosophy?* (London [etc.]: Verso, 1994).

<sup>63</sup> *Ibid.*, 198-99.

<sup>64</sup> *Ibid.*, 164.

<sup>65</sup> *Ibid.*, 163.

<sup>66</sup> For comprehensive historical and contemporary documentation and analysis of art's relation with science and living matters see Reichle, *Art in the Age of Technoscience*; George Gessert, *Green Light: Toward an Art of Evolution*, 1<sup>st</sup> edition (Cambridge, MA: The MIT Press, 2010).

bodies with regard to affect cannot be based on Deleuze's writings on affect in art due to his focus on the specificity of the medium: in cinema, for example, it was about the change of habits of perception of time and space;<sup>67</sup> in literature, affect regarded the transformation of a sign;<sup>68</sup> in painting – transformation of line and colour;<sup>69</sup> in music – transformation of refrain.<sup>70</sup> However, Deleuze's way of writing about affect in relation to a particular medium already hints at how to think about affect within contemporary art practices. For Deleuze, affect within art is about the transformation of a particular medium. When art employs living bodies in its practice, the generated affects are related to the transformation of life and the body itself.

Although the issue of bodily manipulation and speculation about what might be possible within natural science has already been reverberating in art since the beginning of the last century, within, for instance, Dada and Futurism,<sup>71</sup> I would argue that the imagination and approach of today's art with respect to bodily modulations and contaminations gains a new importance. These practices not only work with living bodies, and speculate on the scientific tools and practices that change those bodies, but they also create rituals of their transformations. As the *Contaminant E* of Chapple's performance has already shown, these rituals are not aimed at a unified image of the body, or a unified concept and truth about the body. Rather, they seem to create spaces where, as Mitchell noted, transformations can occur, where the affects of bodies can be generated and prolonged.<sup>72</sup> This practice of transformation in bioart directly touches the relations and contaminations of bodies. Also known as transgenic art or wet art, I argue that it is about the transformation of what we understand by life and living bodies – that bioart becomes conditioning contamination.

Bioart engages with biotechnological tools and employs living materials such as cells, tissue, bacteria or DNA as its expressive medium.<sup>73</sup> By definition, then, bioart marks a break with clear-cut boundaries. By working “on the level of an actual intervention into living systems,”<sup>74</sup> bioart not only blurs fixed distinctions between artistic and biological media, as well as between what can be defined as living and artificial, as human and non-human body, it also makes visible the lack of boundary between the two. If art, as Deleuze and Guattari write, is to preserve uncontained affects, and if science, as they argue, is to contain

<sup>67</sup> Gilles Deleuze, *Cinema I: The Movement-Image*, 1<sup>st</sup> edition (Minneapolis, MN: University of Minnesota Press, 1986); Gilles Deleuze, *Cinema II: The Time-Image*, 1<sup>st</sup> edition (Minneapolis, MN: University of Minnesota Press, 1989).

<sup>68</sup> Gilles Deleuze, *Proust and Signs* (London: Continuum, 2008).

<sup>69</sup> Gilles Deleuze, *Francis Bacon: The Logic of Sensation* (Minneapolis, MN: University of Minnesota Press, 2005).

<sup>70</sup> Gilles Deleuze, Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. by Brian Massumi (London: Continuum, 2004), 329-41.

<sup>71</sup> Reichle, *Art in the Age of Technoscience*, 1.

<sup>72</sup> Mitchell, *Bioart and the Vitality of Media*, 77.

<sup>73</sup> See Jens Hauser, “Bio Art – Taxonomy of an Etymological Monster,” *Hybrid. Living in Paradox, Ars Electronica*, 2005, [http://90.146.8.18/en/archives/festival\\_archive/festival\\_catalogs/festival\\_artikel.asp?iProjectID=13286](http://90.146.8.18/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=13286), accessed 4 September 2013.

<sup>74</sup> Monika Bakke, “Zoe-philic Desires: Wet Media Art and Beyond,” *Parallax* 14/3 (2008), 21

and provide references and actualizations of affect in the state of things,<sup>75</sup> then bioart forces art and science into a curious relationship of affect with its implications. If bioart preserves living bodies, then it also regards the preservation of movements as the implications of body manipulations for the way we act.<sup>76</sup> In this sense, the most interesting question when encountering the phenomenon of bioart is not about its character, i.e. whether it is art or simply bad science, and how it should be treated; rather, it is what does bioart actually do when dealing with living matter?<sup>77</sup> That is, how does bioart work with contaminations of affect – how does it practice bodies within affect?

Bioartists consistently appear to begin with the Spinozian question of what the body can do? Adopting this speculative approach, rather than constructing a reflective image of the status quo, creates new realities in which the problems and implications of particular body manipulations acquire a material dimension. By experimenting with contaminations between bodies, bioartists work with questions such as: how can we know what the body is when the material reconfigurations change? How does our practice transform our presuppositions and knowledge? How is the new possible and how should we act when confronted with the new?

Importantly, the notion of the *new* within bioart is not treated as opposite to old or as an improved version of that which is considered to be old – such a definition would demand thinking according to categories, and a comparison and linear understanding of time and space. As Rick Dolphijn and Iris van der Tuin argue, when talking about new materialism, “new” is rather focused on the multiple relations that are at work; thus, *new* refers to now, i.e. to “this very moment,”<sup>78</sup> which we can also call affect. The *new* in a new material approach, as Dolphijn and Van der Tuin stipulate, indicates the continuous rewriting of the now.<sup>79</sup> Hence, I argue that being within affect as exercised in bioart is not a fixed and given state. As previously mentioned, the challenge arises because the relations of affect are risky; we are in doubt within affect, that is, we simply do not know what the bodies can do and how transformation and contamination will change bodies until we encounter them. Being and thinking within affect demands the continuous rewriting of the meaning and implications of the relations of transformation. Bioart’s practice thus becomes one of many new stories of contaminating encounters.

<sup>75</sup> Gilles Deleuze, Félix Guattari, *What Is Philosophy?*, 126.

<sup>76</sup> See an introduction to art and science collaboration in the context of bioart practice by Robert Zwijnenberg, “Preface. Art, the Life Science, and the Humanities: In Search of a Relationship,” in Ingeborg Reichle, *Art in the Age of Technoscience*, xv-xxxii; also Zwijnenberg’s article on urgency of art and science collaboration that bioartists reveal: “A Two headed Zebrafish,” *Moebius Journal* 1/1 (12 December 2012), <http://moebiusjournal.org/pubs/14>, accessed 21 February 2014.

<sup>77</sup> See my article on the notion of the body’s intensity in Deleuzian philosophy actualized in bioart, where I addressed this question: Agnieszka Anna Wołodźko, “Between Bio(s) and Art – Intensities of Matter in Bioart,” in Ann-Cathrin Drews and Katharina D. Martin (eds), *Innen - Außen - Anders: Körper im Werk von Gilles Deleuze und Michel Foucault*, Edition Moderne Postmoderne (Publisher, Transcript Verlag, 2017), 221-236.

<sup>78</sup> Dolphijn and Van der Tuin, *New Materialism*, 94.

<sup>79</sup> *Ibid.*, 116.

Moreover, reflection informs every stage of the manipulative and creative process of bioart. Indeed, “doing is thinking” equates here to and is virtually inseparable from “thinking is doing”. An excellent bioart formation that experiments with biotechnological body manipulations within art is the artist-run research laboratory, the *Tissue Culture and Art Project (TC&A)*, created by Oron Catts and Ionat Zurr.<sup>80</sup> In response to the lack of discursive platforms addressing the issues and dilemmas of biotechnological realities, Catts’ and Zurr’s work expresses the need to redefine what life and the living body is when life has itself become a commodity. The problematization of bioartists’ ironic and challenging attitude towards tissue culture and living matter manipulation is demonstrated in works such as: *The Semi-Living Worry Dolls* (2000) [Figure 4a, b], the first tissue engineered sculptures to be presented alive in a gallery context; *Pig Wings* (2000-01) [Figure 5a, b], an installation featuring living pig tissue taken from bone marrow stem cells and used to grow three different types of wings; *Semi-Living Steak: Disembodied Cuisine* (2003) [Figure 6a, b], a work in which a meat steak is grown from a frog’s skeletal muscle, without necessitating the killing of the animal donor; and finally, *Victimless Leather* (2004-08) [Figure 7a, b], which involves the growing of living tissue into a leather-like coat-shaped form.<sup>81</sup>

In this book, the selected narrations of contaminants share the above-mentioned TC&A’s struggle to rethink the roles and implications of biotechnological practices. Bioart’s practice and its contaminants, which begin and disrupt each chapter of this book, ask how can we practice those biotechnological bodies in their relationality, which biotechnology itself seems to fail to sustain. The work of bioartists reveals a speculatively pragmatic question about how to transform bodies in a way that does not result in the immediate universalization and destruction of bodies? The discussion of contaminants in this book raises questions that emerge from a deeply affective understanding of how our bodies are and how they become; questions such as how to practice affect while producing affects.

In the following chapters, I will investigate bioart’s distinct potential for the formation of relational and contaminating approaches that could be implemented in the study of affect. In this way, I am not interested in mapping any art theory, or in providing any comprehensive analysis of bioart as a form of art. Instead, my study regards bodies within affect; in other words, the conditions that allow bioart to produce and create spaces where affect can be generated and prolonged. Such an approach implies treating the bioart contaminants discussed in this book as documents and narratives of these practices.

<sup>80</sup> See the home page of the laboratory, which is part of the University of Western Australia, <http://www.symbiotica.uwa.edu.au/>, accessed 21 February 2014.

<sup>81</sup> For a more detailed analysis of the work with regard to a Deleuzian understanding of the body and materiality, see Wołodźko, “Between Bio(s) and Art.”

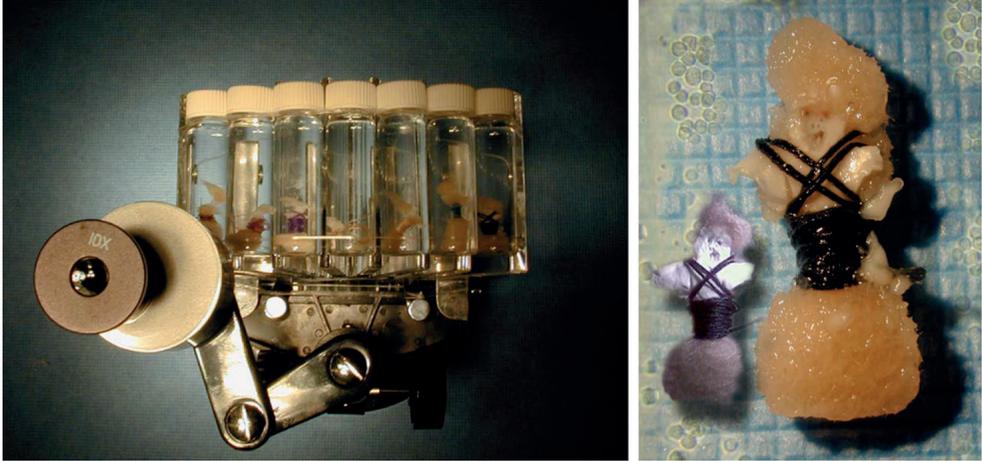


Figure 4 a, b. Tissue Culture and Art Project, *The Semi-Living Worry Dolls*, 2000, <http://lab.anhb.uwa.edu.au/tca/semi-living-worry-dolls/>, accessed 17 March 2017.



Figure 5 a, b. Tissue Culture and Art Project, *Pig Wings*, 2000-2001, <http://lab.anhb.uwa.edu.au/tca/pig-wings/>, accessed 17 March 2017.



Figure 6 a, b. Tissue Culture and Art Project, *Semi-Living Steak at Disembodied Cuisine* exhibition, 2003, <http://lab.anhb.uwa.edu.au/tca/disembodied-cuisine/>; <http://lab.anhb.uwa.edu.au/tca/semi-living-steak/>, accessed 17 March 2017.

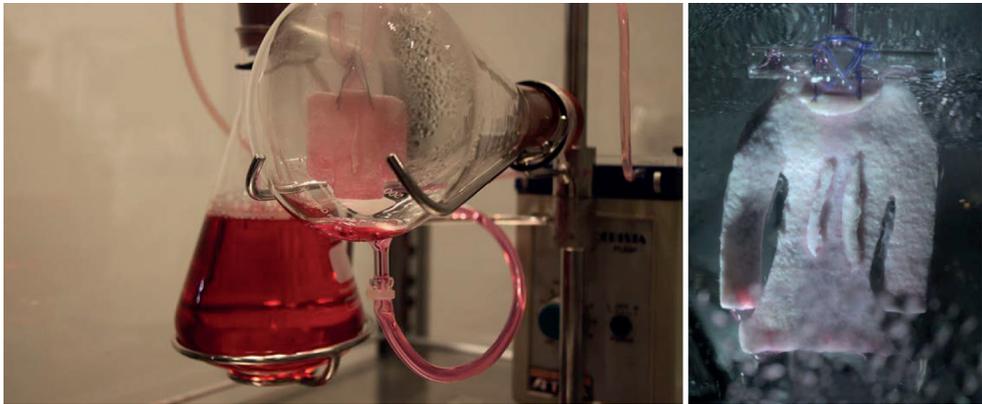


Figure 7 a, b. Tissue Culture and Art Project, *Victimless Leather*, 2004-2008, <http://lab.anhb.uwa.edu.au/tca/vl/>, accessed 17 March 2017.

Importantly, the understanding of bioart as documentation that emerges in this book, is far from an aspiration to bring the reader a detailed and full recollection of events or objects. As such, the notion of documentation would be intertwined with the problems of representing artworks that I want the reader to avoid. Rather, a processual and relational practice of bioart that is a result of working with living media forces the understanding of documentation as described by Groy, namely:

art does not appear in object form – is not a product or result of a “creative” activity. Rather, the art is itself this activity, is the practice of art as such. Correspondingly, art documentation is neither the making present of a past art event nor the promise of a coming artwork, but rather is the only possible form of reference to an artistic activity that cannot be represented in any other way.<sup>82</sup>

The categories of representation make no sense within bioart due to the character of the living medium that it works with. While the biotechnological practices of manipulation of life and living bodies render any essentialist understanding of life, nature and the natural meaningless, the practice of bioart makes a double redefinition. What happens when you make artificially alive something that was neither artificial, nor living? For Groy, bioart’s capacity to bring to life what has never been in the context of living bodies makes it intrinsically caught up within biopolitics.<sup>83</sup> I will argue, however, that bioart’s transformative approach to living matter overcomes even the biopolitical struggle to categorize the natural

<sup>82</sup> Boris Groy, *Art Power* (Cambridge, MA: MIT Press, 2008), 54.

<sup>83</sup> “Art becomes a life form, whereas the artwork becomes non-art, a mere documentation of this life form. One could also say that art becomes biopolitical, because it begins to use artistic means to produce and document life as a pure activity. Indeed, art documentation as an art form could only develop under the conditions of today’s biopolitical age, in which life itself has become the object of technical and artistic intervention”; “Art

and artificial. These transformative capacities seem to be one of the conditions of thinking with affect and, indeed, what it actually means to think with affect.

Moreover, I start from the presupposition of the epistemic notion of art, which allows me to take particular contaminants as being reliable and insightful practices of the generation of meaning regarding living matters today. Ultimately, this will lead my study of bodies within affect to the outline of art's epistemic character, which, in turn, provides an answer to the question: how should we act when we start to examine and take seriously the affective, contaminating nature of our bodies? By studying the processes of how bioart deals with these contaminations in this way, I will map the multiple matters of affect for thinking with affect.

## 1.8 Chapters

The main concern of this book is to study the conditions of how to think and practice bodies within affect. My research employs the notion of contamination as a way of studying and analysing relations of multiple trajectories between fields and perspectives in order to avoid linearity of the argument and method. Nevertheless, two entry points can be distinguished that shape the structure of this book: firstly, the study of bioart's practice of conditioning contaminations allows us to map ways of practicing bodies within affect. The second entry point is thought incarnation of that mapping within new material thought. For this reason, the subsequent chapters are constructed according to the aforementioned new material characteristics, namely:

- a need for a human and non-human egalitarian reciprocity (chapter 2);
- an openness to the non-linguistic forms of meaning generation (chapter 3);
- the notion of agency and subjectivity outside the human dominion (chapter 4);
- the responsibility resulting from a “material contamination” that shapes thought and practice (chapter 5).

Chapter 2, *Animal Relations*, includes a discussion of the notion of affect as human and non-human reciprocity. In particular, it examines how bioart's experimentations with human-non-human body relationality determines our understanding of what this relation is and what it does. As already argued, thinking in terms of relations of contamination of affect implies thinking with the new material focus on onto-epistemologies, where relations generate the possibility of creativity and novelty. In simpler terms, I will discuss how something like a new body can emerge within the multiple relations of transformations.

Chapter 2 tells the story of Marion Laval-Jeantet and Benoît Mangin, an artistic duo called *Art Orienté Objet* (AOO). They performed “Que le cheval vive en moi” (“May

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documentation is thus the art of making living things out of artificial ones, a living activity out of technical practice: it is a bio-art that is simultaneously biopolitics.” Ibid., 54, 57.

the Horse Live in Me” 2011) in which the artist injected horse’s blood into her body. By analysing how they used an experiment as an event of multispecies relationality and contamination, we gain a more vivid understanding of the implications and conditions of relations within affect. This involves, first, rethinking what we should take as a relation within art’s production and, second, how this reflects the notion of affect, in order to finally discuss: how affect may be seen as a relation that can generate bodies and what kind of bodies emerge as a result of this relation.

There are various traditions and strains of explaining what affect is and how it can be applied to contemporary thinking about living matters. However, the differences between these various implementations of affect are not without major consequences and significance for the actual validity of affect for a non-anthropocentric, situated and material understanding of bodies. Chapter 2 thus seeks to clarify the misuse and misreading of affect.

The implications of taking affect seriously, that is, of acknowledging and acting upon the relational nature of our bodies, force us to be open to the non-linguistic forms of meaning generation. In Chapter 3, *Tasting Meaning*, I therefore discuss the new material semiotics, where the significance of the a-signified in the encountered and experienced, but not yet named, is exercised in bioart’s approach to living matter as food.

The notion of affect, as discussed in the Chapter 2, suggests that the material production and happening of what emerges is important for our encounters with bodies. It seems, however, that an understanding of how such material meaning is generated is only possible in the actual, bodily experience. Importantly, such writings about the experience that produces unique meanings does not imply that we must make choices about what to exclude, i.e. between what makes sense and what does not. There are multiple levels of meaningful living, which, when considered equally, pose radical changes for what we take as living bodies. By mapping what is happening within bodily relations, we can grasp how meanings become significant.

The encounters between bodies that are the focus of Chapter 3, as in the second chapter, concern multispecies bodies. I engage with human-food contamination, which includes not only animals, but also plants and chemicals. What happens in your mouth when you eat the smog of the city? The artistic research project *The Smog Tasting*, by The Center for Genomic Gastronomy (CGG), run by Zack Denfeld and Cathrine Kramer since 2010, investigates the biotechnologies and biodiversities of the human food system. It provides some answers, but mostly throws up unexpected problems. The understanding of the contaminations of affect necessarily shapes material semiotics, where meaning is entangled with matter.

Thinking about affect and with regard to affect thus changes not only what we understand by those bodies that emerge from within relations, but also what kinds of meanings are produced. In the face of biotechnological practices that render bodies literally, materially multiple, we urgently need to find corresponding material conceptualizations that, in turn, are able to sustain the practice of relational and materially significant bodies. We must be able to capture what it actually means to live, to practice affect in order to

then be able to transform those practices. In Chapter 4, *Living Within Multiplicity*, I ask what the implications of fostering bodies multiple and dynamic relationality are once the anthropocentric conceptualization of bodies' agencies and meanings change.

Rosi Braidotti argues that in order to think about the agency of bodies in an affective way, we must shift our focus from identities that are "egoindexed" into subjectivities that reflect the processual and relational character of bodies.<sup>84</sup> In other words, affect forces us to touch the non-human within the many layers of our all-too-human bodies. Braidotti conceptualizes this understanding of non-unified subjectivities, agencies, selves that are beyond the logic of fixed identities and yet materially important as nomadic. She writes:

Being nomadic, homeless, an exile, a refugee, a Bosnian rape-in-war victim, an itinerant migrant, an illegal immigrant, is no metaphor. Having no passport or having too many of them is neither equivalent nor is it merely metaphorical [...] These are highly specific geo-political and historical locations – history tattooed on your body.<sup>85</sup>

I follow her understanding of non-unified, yet materially significant subjectivity by focusing on one of the implications of nomadic subjects within the bio(geo)political dimension of biotechnologically manipulated bodies that accumulates in the concept of multiplicity. Deleuze's writings on multiplicity and difference provide a sense of a conceptual path that we could take when grasping the phenomena of multispecies. Yet, even Deleuze could not predict the actual material implications that biotechnological findings have today on the dynamic and relational character of the body. In turn, science alone cannot grasp the conceptual novelty that its 'material' findings foster. In Chapter 4, I therefore confront the inevitably pragmatic question of how thinking about multibodies within affect demands dynamic practices and the politics of the multiple.

Encountering the *Contaminant* of the movie *Przekładaniec* (1968), directed by Andrzej Wajda, which is based on a script written by Stanisław Lem, I will introduce the possibility of thinking in terms of the multiple. I start from the standpoint that this barely known (also in Poland) science fiction movie – nota bene, the only movie made by Wajda in this genre – is a rhetorical move. Besides my personal desire to revitalize the marginalized speculative work of a director who is generally believed to only make movies about Polish history, I want to draw attention to the multiple narratives of the struggle of how to think multiplicity. Although this book is focused on bioart's practice with bodies within affect, bioart's speculative way of thinking can be found in the speculative methods of cinema and

<sup>84</sup> "Whereas identity is a bounded, ego-indexed habit of fixing and capitalizing on one's selfhood, subjectivity is a socially mediated process of relations and negotiations with multiple others and with multilayered social structures." Rosi Braidotti, *Nomadic Theory: The Portable Rosi Braidotti* (New York: Columbia University Press E-book, 2011), chapter: "Introduction".

<sup>85</sup> Rosi Braidotti, *Metamorphoses: Towards a Materialist Theory of Becoming*, 1<sup>st</sup> edition (Cambridge, UK/ Malden, MA: Polity, 2002), 3.

literature. Thus, when writing about multiplicity in this chapter, I use multiple speculative tools in order to map the struggles and ways of narrating the practice of the multiple. By disrupting the chapter with another *Contaminant*, in this case *Microbiome Security Agency* (2015) I further discuss how, today, facing the realities that Lem could only have imagined, we can create new stories that will shape new tools for practicing the multiple that affect engenders.

The concluding chapter, *Ethics of Contamination*, queries the consequences of thinking within affect for the way we can practice its relational and dynamic character within our multibodies. This question of consequences, which is inseparable from the drive to create and transform, is discussed along two distinct *Contaminants*. The line of flight that guides my thinking about how to practice bodies within affect, becomes here risky because it is contaminating, yet close because it is both urgent and important for our mutual multibodies.





# Chapter 2

## Animal Relations

Affects are precisely these nonhuman becomings of man.<sup>1</sup>

### 2.1 *Contaminant B* like the Blood of a Horse

In preparation for the performance “May the Horse Live in Me”, staged over several months, Marion Laval-Jeantet had injected horse immunoglobulins into her blood stream in order to develop a tolerance to the foreign animal blood. The injection of foreign animal blood can be fatal for the human body, therefore, the blood had to be made “safe,” the artist explained. It was thus deprived of “bulky cells such as red blood cells, white blood cells, macrophages, etc.” What Laval-Jeantet actually injected was “the plasma, which contains hormones, lipids, and several kinds of proteins (immunoglobulins, cytokines, etc.) among other things.”<sup>2</sup> However, the extraction and apparent purification of horse’s blood from substances harmful to humans, did not mean the performance was entirely safe. For this reason, the artists could not find a gallery anywhere in Central Europe to host the event. The moment they signalled the need for paramedics to be present and possibly assist during the event, their project met with refusal.<sup>3</sup>

The final performance of Laval-Jeantet injecting the horse blood plasma [Figures. 8 a, b, c, d] took place in the Galerija Kapelica, (Ljubljana, Slovenia) in 2011. Due to the gradual and controlled build-up of tolerance, this injection did not result in Laval-Jeantet going into anaphylactic shock – a severe allergic reaction to a foreign chemical. However, because the extracted components of the horse’s blood are closely tied to the nervous system, the artist admitted that in the two weeks following the performance she experienced weakness,

<sup>1</sup> Gilles Deleuze, Félix Guattari, *What Is Philosophy?*, (London: Verso, 1994), 169.

<sup>2</sup> Marion Laval Jeantet, “May the Horse Live in Me,” Hemispheric Institute E misférica, <http://hemisphericinstitute.org/hemi/fr/e101-jeantet-essay>, accessed 9 September 2015.

<sup>3</sup> Marion Laval-Jeantet and Benoît Mangin, “Prix Forum I Hybrid Art - Art Orienté Objet - EN - YouTube,” <https://www.youtube.com/watch?v=dxztkwiAJCY>, accessed 9 September 2015.

anxiety and oversensitivity. After the transfusion of blood, the artist put on stilts, which were designed to imitate a horse's legs, and carried out a communication ritual with the horse. The horse, called Viny, was the same animal from which the blood was taken and with whom the artist, accompanied by an animal behaviourist, had become acquainted during the ten days of blood injections.

Initially, the idea had been to inject panda blood into a human, due to pandas being under the threat of extinction. Despite the artist's argument that she was willing to become a sort of surrogate for the animal, by extending the panda's life through her body, no zoo agreed to the collaboration. Given the servile nature of the horse's relationship with humans, it became an easier choice. Moreover, as the artist explains, the immunological system of a horse, in comparison to other farm animals, is the most distant from that of humans. A sheep could have been an alternative, however, Laval-Jeantet and Mangin felt the horse, as a larger animal, constituted a greater challenge.<sup>4</sup>

The performance ended with the extraction and freezing of the artist's hybridized blood. As *Art Orienté Objet* subsequently explained, it was all about meeting with the other body. The extracted blood, although already coagulated, revealing the invasive result of the meeting, became a sort of a relic of the encounter.<sup>5</sup>

Despite the institutional and discursive negotiations that forced the artists not only to follow necessary protocols and policies, but also to change their initial ideas, their work remained remarkably non-teleological and non-instrumental. The performance was not about representing some scientific goal and seeking some transhumanist idea of the fixation of the body into a desired form. After all, although monitored and under medical supervision, the performance appeared to express the impenetrability of the body and the pursuit of expanding the body's porosity. The artists seemed to draw attention to the notion of the human as already posthuman, or rather postanthropocentric – as being already beyond the fixed and given notion of the body, reaching towards its intensive, relational and multispecies dimension and towards affect as a relational way of becoming.

Importantly, this expression of relationality in the form of a meeting of two distinct bodies is far from neutral. *Art Orienté Objet*'s experiment examines what I call affect's relationality as a risky form of transformation. AOO talks in terms transistasis – instead of searching for a convenient balance between bodies, it provokes imbalance, and stimulation from a stable and safe state. The relationality that they exercise becomes contamination which may result in the acceleration or destruction of bodies. The only aim was “to try to feel in another way than human,” as Marion Laval-Jeantet explains. The possibility to evaluate such contamination could only be achieved through the act of self-experimentation with one's own body while relating to another. Regarding affect, in this case, the relation of contamination fosters experimentation that is unlike anything we know from science – instead of proving what is there, it creates, invents, modulates and transforms. The

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<sup>4</sup> Ibid.

<sup>5</sup> Ibid.

contaminating matters of affect thus concern the conditions in which bodies, through their deviations and transformations, create each other, anew.



Figures 8 a, b, c, d. Art Orienté Objet, *May the Horse Live in Me*, 2011, footage from the performance in Galerija Kapelica, (Ljubljana, Slovenia), <http://aoo.free.fr/works-2011-001.html>, accessed 17 March 2017.

## 2.2 Experimentations that Resist Identification

Experiment, as a method and a tool, has a long and non-linear history within natural philosophy, science and medicine.<sup>6</sup> It is generally said that experiment as a scientific method of manipulation and intervention constitutes the beginning of the Scientific Revolution, which left behind the strictly observatory and analytical approach within science.<sup>7</sup> Today, experiments have become a demonstration, a proof of the truth or falsification of a hypothesis: “An action or operation undertaken in order to discover something unknown,

<sup>6</sup> On the history of experiment and its philosophical importance see Ian Hacking, *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science* (Cambridge: Cambridge University Press, 1983).

<sup>7</sup> See a short historical outline of the understanding of difference between observation and experimentation by Saira Malik, “Observation Versus Experiment: An Adequate Framework for Analysing Scientific Experimentation?” *Journal for General Philosophy of Science* 48, no. 1 (1 March 2017): 71-95, doi:10.1007/s10838-016-9335-y; See also Martin Curd, *The Routledge Companion to Philosophy of Science*, 2<sup>nd</sup> edition, Routledge Philosophy Companions (Florence: Taylor and Francis, 2013), 191-202.

to test a hypothesis, or establish or illustrate some known truth.”<sup>8</sup> The method of scientific experiment has become inseparable from the precise conditions and quantitative relations that can be repeated in order to ensure the universal or general validity of findings. In other words, scientific experiment is designed to be repeated in order to be valid. This sense of repetition presupposes a resemblance between singular events and general laws, since to repeat means to maintain the same numerical relations. As Deleuze notices, such scientific experimentation: “is thus a matter of substituting one order of generality for another: an order of equality for an order of resemblance.”<sup>9</sup>

As such, scientific experimentation depends on the primacy of identity, which allows for the classification and representation of things. The structures based on identity, representation and signification allow us to function within a discourse that is commonly recognised as meaningful. The problem starts, however, when we take the logic of identity as prompting difference – that is, as the claim to induce something new on the basis of a negative relation to what is already there. Isabelle Stengers calls this model of novelty, founded on the mechanism of negation or going against the status quo, “a contrasted unity” between young, beardless scientists who claim to contradict or modernize established bearded science. However, such endeavours, as she puts it, result in a strengthening of that which was supposed to be overturned: “The kind of science that the youth has learned is the bearded one [...] the dreams of the youth, his ambitions, are bearded ones.”<sup>10</sup> Affect, like the relations of contamination, cannot therefore be based on this notion of experimentation. The contaminant in the performance of “May the horse live in me”, not only provides arguments why, but also shapes a distinct understanding of experimentation as creation, rather than as a demonstration of truth.

Whether Art Orienté Objet’s artistic experiment perpetuates the old paradigms can be analysed more closely from the perspective of the practice that it performs, namely xenotransfusion. As Robert Zwijnenberg argues, when writing about the performance “May the horse live in me,” the history of blood transfusion from non-human species to human, a practice that dates back to the seventeenth century, served mainly to improve or enhance the health of humans. Animal life and body play an instrumental role in this relationality. As he writes: “xenotransfusion was performed numerous times in Europe, despite the fact that it seldom led to the patient’s recovery. [...] the beneficial effects of xenotransfusion were reinforced by the notion that the blood was the bearer of emotions.”<sup>11</sup>

<sup>8</sup> “Experiment, N.,” *OED Online* (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/66530>, accessed 10 September 2015.

<sup>9</sup> Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Columbia University Press, 1995), 3.

<sup>10</sup> Isabelle Stengers, “Deleuze and Guattari’s Last Enigmatic Message,” *Angelaki* 10, no. 2 (2005): 154, doi.org/10.1080/09697250500417399.

<sup>11</sup> Robert Zwijnenberg, “Stranger Connections. On Xenotransfusion and Art,” in *Institutional Critique to Hospitality: Bio Art Practice Now. A Critical Anthology*, ed. Assimina Kaniari, Athens: Grigori Publications [Εκδόσεις Γρηγόρη], Art History and Theory 5 (2017), 131.

It was the belief that blood has transformative capacities that could enhance and improve the health of humans that perpetuated the practice.

Unlike the historical practice of xenotransfusion, AOO's performance was not about being more human, or acquiring a healthier body. As Zwijnenberg analyses the performance within the historical context, the blood transfusion performed by the artists was "not in order to improve her health at the expense of the horse, but in search of a biological and affective proximity to the horse."<sup>12</sup> It thus seems that AOO does not perpetuate the logic of "bearded science." The artists conducted an experiment that, while it maintained "safety" protocols, was roughly reduced to a condition that guaranteed a non-lethal result. The experiment was not designed to improve something. Instead, it was a trial.

The AOO artists appear to express what the body can do when it meets another body. The possible outcomes were already known, and the artists gave no sign that they intended to prove or disprove the existing facts. Instead, they exercised the power to use one's own body to test out its biologically, socially and culturally established borders: "the purpose was to try to feel."<sup>13</sup> This "try out," renders the etymological roots of the verb "to experiment," which in Latin – *experiri* – means "to try."<sup>14</sup>

Nevertheless, Zwijnenberg points out that the attempt to break boundaries in AOO's performance is tinted with dark tones. Instead of actually overcoming any boundaries and hierarchies between species bodies, the artists may actually strengthen existing ones. After all, the horse remained passive during the whole process of transfusion, and it was a human that was the main focus of the experiment. As Zwijnenberg concludes,

Que le cheval vive en moi [May the horse live in me] signals the end of our naïve belief that we can reach a new relationship with animals without radically reconsidering our traditional notions of this relationship; we have to look for new ways that can respond to new materialism's urgent call for a nonhierarchical relationship between humans and non-humans.<sup>15</sup>

In other words, if the AOO experiment is to transform "bearded science", it must not only break the old logic and categories, but also create new ones.

I argue that in the AOO performance, the artists initiate a notion of experimentation that, rather than being based on identity as demonstration of truth, is based on processes of contaminating relationality through which bodies are created rather than identified. Such a creative practice of experimentation is reached by embedding the notion of the partiality of the observer in their approach. Within the experiment, the participating bodies become partial in a sense that no-one is positioned as the autonomous, objective performer.

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<sup>12</sup> Ibid., 134.

<sup>13</sup> Laval-Jeantet and Mangin talk at, "Prix Forum I Hybrid Art – Art Orienté Objet – EN – YouTube."

<sup>14</sup> "Experiment, N."

<sup>15</sup> Zwijnenberg, "Stranger Connections," 135.

What matters in the experiment are rather the things studied, that is, bodies and their capacities, coordinates that pose particular values and ways of practice when relating with the living multispecies bodies. In this way, partiality becomes a key concept when grasping the particular notion of relationality that foregrounds what can be understood by affect and its implications. Within AOO's practices of relationality, there are no subject or objects that would belong to the experiment, that would determine its aims and results. Nor is there any experiment that would belong to the particular object and subject. Nevertheless, to ensure that the experiment occurs, its participants must maintain a particular condition. Thus, partiality becomes a condition of a form of experimentation that is based on relationality.

A partial observer finds herself within a relationship that does not belong to her, or to the things studied. For Deleuze and Guattari, "partial observers belong to the neighbourhood of the singularities of a curve, of a physical system, of a living organism."<sup>16</sup> Importantly, partiality as such does not mean acknowledging any limitation or necessity of a particular agentive position of the observer. "The observer is neither inadequate nor subjective,"<sup>17</sup> Deleuze and Guattari argue. Rather, the partiality of the observer constitutes the occurrence of the experimentation – the partiality itself as it happens.<sup>18</sup>

Experimentation based on the partiality, in other words, on a relationality that means none of the participants holds a leading or autonomous position, becomes a resonance in situations of transformation. Rather than discovering what is true, experimentation functions according to what Deleuze and Guattari call "the truth of relative."<sup>19</sup> Within the experiment, we are not occupied with uncovering and finding the truth or with examining the conditions of truth. Nor are we focused on proving a thesis – we are not writing manifestos, as Deleuze argues.<sup>20</sup> Instead, while experimenting, we are mapping what is happening, we are sketching the conditions, creating the programmes and protocols of "how to do" rather than "what to do", so that new relations may be produced: "Seeing, seeing what happens, has always had a more essential importance than demonstrations."<sup>21</sup>

Importantly, for Deleuze and also with respect to AOO's performance, it is not that we undermine the validity of the truth itself in this partial notion of experimentation. We are not presupposing the impossibility of truth or its critique by mapping the relations that happen during the experiment. Rather, we encounter a different logic that is driven by a

<sup>16</sup> Deleuze and Guattari, *What Is Philosophy?*, 130.

<sup>17</sup> *Ibid.*, 129.

<sup>18</sup> "Even in quantum physics, Heisenberg's demon does not express the impossibility of measuring both the speed and the position or a particle on the grounds of a subjective interference of the measure with the measured, but it measures exactly an objective state of affairs that leaves the respective position of two of its particles outside of the field of its actualization, the number of independent variables being reduced and the values of the coordinates having the same probability. Subjectivist interpretations of thermodynamics, relativity, and quantum physics manifest the same inadequacies. Perspectivism, or scientific relativism, is never relative to a subject." *Ibid.*, 129-30.

<sup>19</sup> *Ibid.*, 130.

<sup>20</sup> Gilles Deleuze and Claire Parnet, *Dialogues*, trans. Hugh Tomlinson and Barbara Habberjam (New York: Columbia University Press, 2007), 48.

<sup>21</sup> Deleuze and Guattari, *What Is Philosophy?*, 128.

different than truth sense of importance. When AOO entered the laboratory using tools and scientific methods, they did so not to imitate and fulfil particular presuppositions, or to verify assumed hypotheses or undermine scientific practice. Rather, their performance was driven by a simple, yet profound need to encounter the body's functions and capacities. By experimenting within the partiality of the encounter, they created new, transformative relations of affect.

Experimentation as such is a way of entering into the space of relations that are already in the middle, between and within bodies. In its performance, AOO's partiality occurs between bodies, undermining any assumptions about their fixed and autonomous characteristic, exploring instead their porosity and fluidity. Deleuze would frame such an exploration, which begins from relations between bodies, in the context of resistance, as a protest against identity and autonomy of bodies: "Relations are in the middle, and exist as such. This exteriority of relations is not a principle, it is a valid protest against principles."<sup>22</sup>

Through its experimentation, AOO resists the principle of fixed and autonomous bodies. However, their resistance, as Isabelle Stengers puts it: "does not mean to criticise or to denounce but to construct."<sup>23</sup> The artists do not criticise the logic of identity, they do not denounce the dominant presupposition that humans desire to relate with other, less privileged animals. After all, Viny, the horse, had no say in whether he wanted to participate in the encounter. However, rather than criticize existing practices when relating to animals, which would demonstrate and identify, for instance, their moral position, the artists follow a different logic. Through experimentation and encounter, a human and a horse become partial – they are foreigners, neighbours of their own artistic, animal, biotechnological and interspecies realm. Such experimentation, an encounter with relations, becomes thus the necessity to resist identification as a form of creation. The creation of new relations of transformation becomes, in other words, a form of resistance.

### 2.3 *Contaminant S* like the Sacrifice of a Pig

On 26 January 2017, the image of the first human-pig embryo appeared in major newspapers and websites worldwide as well as scientific journals and online platforms [Figure 9]. Contextualized within the rhetoric of fulfilling the scientific dream, the embryo was praised for its promise "of generating tissue and organs for transplantations into humans."<sup>24</sup>

<sup>22</sup> Deleuze and Parnet, *Dialogues*, 55.

<sup>23</sup> Stengers, "Deleuze and Guattari's Last Enigmatic Message," 152.

<sup>24</sup> From video "Scientists from the Salk Institute discuss the breakthrough," in Hannah Devlin, "First Human-Pig Chimera' Created in Milestone Study," *The Guardian*, 26 January 2017, sec. Science, <https://www.theguardian.com/science/2017/jan/26/first-human-pig-chimera-created-in-milestone-study>, accessed 17 March 2017.

Although the procedure is still in its infancy, and only a few human cells have survived in a non-human body,<sup>25</sup> the discussion around the possibility of animal-human relationality has been fierce.<sup>26</sup>



**Figure 9.** Four-week-old pig embryo injected with human cells. *National Geographic*, <http://news.nationalgeographic.com/2017/01/human-pig-hybrid-embryo-chimera-organs-health-science/>, accessed 17 March 2017.

Importantly, neither the pursuit of enhancement, nor the ethical concerns accompanying such endeavours portrayed these biotechnological chimeras as monsters today. The word “chimera”, after all, is the name of a monster from Greek mythology, which has a lion’s head, goat’s body and serpent’s tail. It was considered to have the most illogical body composition and, consequently, it was embraced with fascination, but it was also feared.<sup>27</sup> Similarly, a different Greek mythological figure such as Minotaur, with the body of a man and head of a bull, was a sign of punishment for disobedience. Its role was to evoke terror and prevent any deviations from what was considered to be the norm. In this way, within the mythological imagination, animal characteristics in humans are an expression of wrongdoing, immoral behaviour or heresy.<sup>28</sup> By visualizing the lack of boundary between bodies, the mythical chimera was able to sustain the order of things, keep the binary boundaries intact, maintain fixed identities and ascribe essential moral values and roles rather than blur them. Myths, as Levi Strauss argues, “provide a logical model capable of overcoming a contradiction,”<sup>29</sup> rather than sustaining it.

<sup>25</sup> See Jun Wu et al., “Interspecies Chimerism with Mammalian Pluripotent Stem Cells,” *Cell* 168, no. 3 (January 26, 2017): 473–486.e15, doi.org/10.1016/j.cell.2016.12.036.

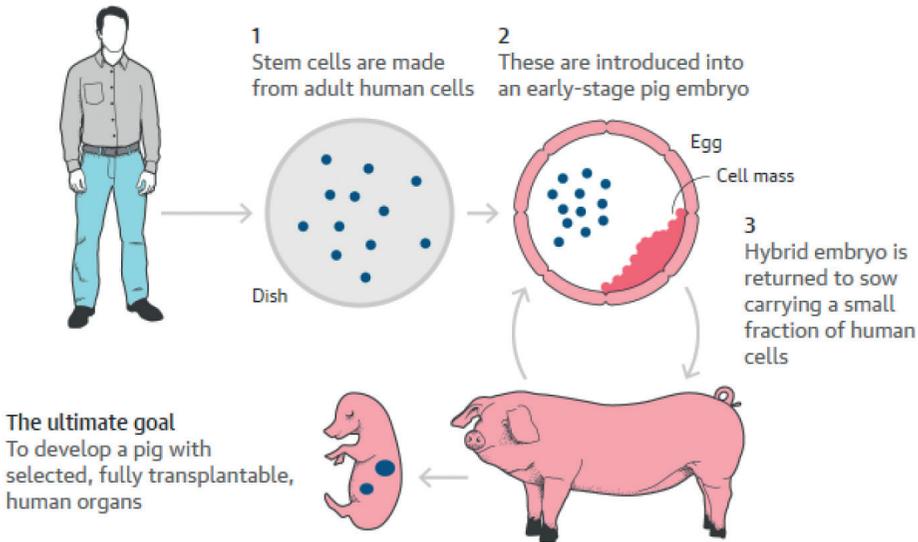
<sup>26</sup> Devlin, “First Human-Pig ‘Chimera’ Created in Milestone Study”; James Gallagher, “Human-Pig ‘Chimera’ Embryos’ Detailed,” BBC News, 26 January 2017, sec. Health, <http://www.bbc.com/news/health-38717930>, accessed 17 March 2017; Nicholas Wade, “New Prospects for Growing Human Replacement Organs in Animals,” *The New York Times*, 26 January 2017, <https://www.nytimes.com/2017/01/26/science/chimera-stemcells-organs.html>, accessed 17 March 2017.

<sup>27</sup> See Anne Roes, “The Representation of the Chimaera,” *The Journal of Hellenic Studies* 54 (1934): 21–25, doi.org/10.2307/626487.

<sup>28</sup> See Phillip Karpowicz, Cynthia B. Cohen, and Derek J. Van Der Kooy, “Developing Human-Nonhuman Chimeras in Human Stem Cell Research: Ethical Issues and Boundaries,” *Kennedy Institute of Ethics Journal* 15, no. 2 (2005): 107–8; Shane Patrick McNamee, “Human-Animal Hybrids and Chimeras: What’s in a Name?,” *JAH* – *European Journal of Bioethics* 6, no. 11 (6 May 2015): 47–48.

<sup>29</sup> Claude Lévi-Strauss, *Structural Anthropology*, (New York: Basic Books, 1963), 229.

## Creating human-pig chimera embryos



Guardian graphic | Source: Cell Press, Wu et al.

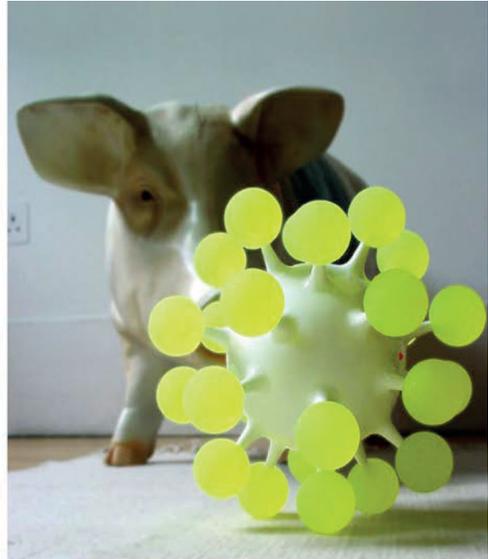
Figure 10. Creating human-pig chimera embryos, *The Guardian*, <https://www.theguardian.com/science/2017/jan/26/first-human-pig-chimera-created-in-milestone-study>, accessed 17 March 2017.

Today, biotechnological chimeras have a soft pink colour and are accompanied by equally rose-coloured diagrams explaining the processes of transformation [Figure 10]. Rather than generating fear in order to sustain habitual and biological boundaries, the new chimeras promote transformations and mutations. With the new biotechnological possibilities – methods such as xenotransplantation, i.e. the transformation of living cells and tissue from one species to another – boundaries are blurred, diminishing any fears from the past. Accompanied by a rhetoric of the myriad advantages for human health and well-being, there is a newfound trust in human and animal relationality and its necessity if we – humans – want to lead a better, more sustainable life.

As Donna Haraway wrote in her *Cyborg Manifesto*: “the boundary between scientific and social reality is an optical illusion.”<sup>30</sup> Within the new biotechnological, biomedical practices, we are already what she calls cyborgs, chimeras that render the distinction between organic and inorganic, human and animal, irrelevant. The lack of significance of the old categories is grounded in a shift of thinking in terms of what we find important. Rather than fixating on what is, what is essential, we focus on how could we live otherwise: “The cyborg is our ontology [...], it gives us our politics. The cyborg is a condensed image of both imagination

<sup>30</sup> Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature*, 1<sup>st</sup> edition (New York: Routledge, 1990), 149.

and material reality.”<sup>31</sup> As such, the cyborg is “committed to partiality,”<sup>32</sup> Haraway argues. The cyborg, the contemporary biotechnological chimera, is without resentment of the past, of the search for lost identity. It rather becomes the persona of creative experimentation, embodying the continuous process of mutating and living in-between.



<sup>31</sup> Ibid., 150.

<sup>32</sup> Ibid., 151.



Figures 11 a, b, c, d. Elio Caccavale, *Utility Pets*, 2004, [http://hypernatural.com/museum/elio\\_caccavale.html](http://hypernatural.com/museum/elio_caccavale.html), accessed 19 March 2017.

In this way, the image of the first human-pig embryo seems to express the hope of Haraway's cyborg. The soft colours, the wetness of the moment captured by the microscope's camera, evokes the excitement of the encounter with life, with the new and mysterious form of living body, calling for care, rather than fear. However, alongside fascination and the desire to fulfil the scientific dream, the questions of how to live, how to practice these new biotechnological bodies embedded in a radical human-animal relationality creep in.

The urgent question in the face of these biotechnological chimeras is thus not when and how the science can create them, but how to live when the boundaries are blurred, how to practice the human-nonhuman relationality that we have become? In the biotechnological age, it is science that produces new images of bodies, while it seems that it is for art to experiment with how we are to live within them.

*Utility Pets* (2004) by Elio Caccavale is such a speculative experimentation with the new image of our multispecies bodies [Figures 11 a, b, c, d]. Caccavale imagines here what life might be like once xenotransplantation becomes our everyday reality: "In an imagined not so-distant future, shortly after birth, people will be given a piglet with their own DNA engineered into it. The pig, known as a knockout pig in the scientific jargon, is a form of a living insurance policy – an organ bank."<sup>33</sup> This speculative project, however, explores how our relations with these animals might develop and function when the clear boundaries between species are blurred. The animal used to serving as food or companion becomes

<sup>33</sup> "Utility Pets," Work, V2\_Institute for the Unstable Media, <http://v2.nl/archive/works/utility-pets>, accessed 16 March 2017.

something in-between, neither to be consumed, nor to be played with, and yet both. The pig is to become you, it is already part of you, carrying your genes, which makes the animal a blood-related family member, rather than a pet.

With the new interspecies reality, new questions and practical dilemmas emerge: how should you live with a pig not only as your pet, but as a part of you? Caccavale imagines thus a series of toys and stimulations for pigs, to ensure not only that they have a healthy existence, but are happy and connected to human life:

The Utility Pet products include a low-resolution TV exclusively for pigs, which they can control by themselves: a pig toy with a microphone and a radio handset allowing the owner to listen to the pig enjoying itself; a smoke-filtering device allowing a person to smoke in front of the pig without it suffering the consequence of passive smoking; and a comforter – a psychological product made from the snout of the sacrificed pig, which serves as a memento after the xenotransplantation has been carried out, and helps people come to terms with the contradictory feelings generated by this complex situation.<sup>34</sup>

Caccavale imagines ways of maintaining and exploring the close relationship between human and non-human. Instead of focusing on the uneven power relationality between species, as result of the obvious utility of the pig for the human purposes, the speculative work experiments with a relationship of compassion, care and ensuring a sense of happiness for the non-human. A deep, yet asymmetrical relationship between human-pig prompts a realization, not only about the need to manage the risks of xenotransplantation, but mostly about ensuring new ways for both species to live contentedly. In this way, instead of demonizing the biotechnological future that has already become a scientific possibility, bioartists such as AOO and biodesigners like Caccavale experiment with contaminations by creating the spaces that make them possible. Through creation of contaminations as part of the process of understanding and living, the new hybrid bodies become themselves transformative ways for us to live, whoever we may become – selfish killers, companion species or both?

## 2.4 The Becoming of Affect

Bioartists and biodesigners actualize the sense of experimentation, in the sense that to experiment is to enter the sphere of relations and make them anew. This happens not by destructing the old established relations, but by adding another one, and another to

<sup>34</sup> “Wild Things (Blowup Reader 1),” Page, V2\_Institute for the Unstable Media, 60, <http://v2.nl/archive/articles/wild-things-blowup-reader-1>, accessed 16 March 2017.

the already existing.<sup>35</sup> Importantly, the sense of relationality exercised in AOO's and Caccavale's contaminants is not determined by the participatory bodies. This means that neither the blood of Viny mixed with the human body of Laval-Jeantet, nor the human-pig companionship completely regulate what will actually happen during the encounter. Rather, the contaminants discussed create the spaces where the human-non-human relationality may be practiced and experimented with – lived through.

Deleuze calls such a phenomenon the exteriority of relations with regard to their terms.<sup>36</sup> This implies that the change of relations does not change the bodies that participate in such relationships. In the case of the work of AOO, this would mean that the artist's encounter with the other body cannot result in a change of either body. Instead, it only creates a new relation; it adds to the existing relationship between the human and the horse. How, then, can we talk about the sense of relationality that engenders and produces bodies? However, Deleuze stipulates: "This exteriority of relations is not a principle, it is a vital protest against principle."<sup>37</sup>

To experiment, that is, to enter a relation, is to question the primacy of identity. It is an attempt to create that begins not from a sense of given identity, but from a relation – a form that occurs in-between bodies. What, then, is a relation that foregrounds the AOO experiment and Caccavale's speculative project? To think in a relational way and to practice these relations implies taking these questions seriously: can we create encounters that change not only relations between bodies, but also the bodies themselves? If a manipulation does not really change the body, but, on the grounds of the exteriority of relations to their terms, we can only manipulate these relations, we need to ask about the implications of such manipulation.

Biotechnological manipulation of bodies that blur any fixed boundaries are driven by the sense of transformation, which, *telos*, is a sheer exploration of a body's capacities. Bioartists and biodesigners promptly explore these transformations that expand bodies and their materiality by making a body's borders more porous and more relational. Deleuze conceptualized such a drive towards transformation in the notion of becoming as an ontological basis for every life and creation. Becoming happens beyond given subjects, identities and the comparisons between them. As Deleuze and Guattari write, becoming, as a movement of transformation, "places elements or materials in a relation that uproots the organ from its specificity, making it become "with" the other organ."<sup>38</sup> Becoming is an event that can be captured by a verb rather than a noun. This means that it is important to experiment with what bodies can do, rather than focus on what they are. This is a Spinozian plea, drawn from his *Ethics* and put into motion:

<sup>35</sup> See Deleuze, *Difference and Repetition*, 68–69.

<sup>36</sup> Deleuze and Parnet, *Dialogues*, 55.

<sup>37</sup> *Ibid.*

<sup>38</sup> Deleuze and Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. by Brian Massumi (London: Continuum, 2004), 285.

Nobody as yet has determined the limits of the body's capabilities: that is, nobody as yet has learned from experience what the body can and cannot do, without being determined by mind, solely from the laws of its nature insofar as it is considered as corporeal. For nobody as yet knows the structure of the body so accurately as to explain all its functions, not to mention that in the animal world we find much that far surpasses human sagacity, and that sleepwalkers do many things in their sleep that they would not dare when awake clear evidence that the body, solely from the laws of its own nature, can do many things at which its mind is amazed. Again, no one knows in what way and by what means mind can move body, or how many degrees of motion it can impart to body and with what speed it can cause it to move. Hence it follows that when men say that this or that action of the body arises from the mind which has command over the body, they do not know what they are saying, and are merely admitting, under a plausible cover of words, that they are ignorant of the true cause of that action and are not concerned to discover it.<sup>39</sup>

Experimentation with bodies' capacities leads to the construction of the unexpected, of new knowledge, "nonhuman becomings of man,"<sup>40</sup> human-pig bodies, and horse-woman friendships that become creations that cannot be presupposed. Since we do not know what our bodies can do, by experimenting, seeing what happens, we create spaces of relationality, the body's capacities at work. Deleuze and Guattari, following Spinoza, call such generation of new relationality through experimentation alliances:

Alliance or the pact is the form of expression for an infection or epidemic constituting the form of content. In sorcery, blood is of the order of contagion and alliance. It can be said that becoming-animal is an affair of sorcery because (1) it implies an initial relation of alliance with a demon; (2) the demon functions as the borderline of an animal pack, into which the human being passes or in which his or her becoming takes place, by contagion; (3) this becoming itself implies a second alliance, with another human group; (4) this new borderline between the two groups guides the contagion of animal and human being within the pack.<sup>41</sup>

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<sup>39</sup> Baruch Spinoza, Ethics, III P2 Scholium, in Baruch Spinoza, *Spinoza: Complete Works*, ed. Michael L. Morgan, trans. Samuel Shirley, 1st edition (Indianapolis, IN: Hackett Publishing Company, Inc., 2002), 280.

<sup>40</sup> Deleuze and Guattari, *What Is Philosophy?*, 169.

<sup>41</sup> Deleuze and Guattari, *A Thousand Plateaus*, 272.

Becoming as experimentation with contagion situates itself within a relationality that generates new bodies. The contagion of becoming creates unexpected alliances, cyborgs and chimeras that transgress their borders. Becoming of bodies happens thus within relationality, as a movement of transformations beyond fixed subjectivity and presupposed purpose; it is continuously driven by the “force of metamorphosis.”<sup>42</sup>

This continuity of becoming as a movement of transformation, experimentation that happens within relationality and between bodies, demands an equally relational way of thinking. The logic driven by becoming is not based on identity and boundaries outlined by subjectivity. Rather, the thinking that transformative experimentations and contagious becomings enforce must take a transformative movement of relationality. How, though, should we use such an affective logic of transformative relations in a way that sustains, rather than resists, the movements of contamination? In other words, how can our chimeras foster change, rather than perpetuate old fears and ideas?

Eugene Thacker’s definition of “biotech,” is useful in this regard. He argues that the biggest concern in the discussion of the new bodies within biotechnological practices is not their disembodiment or the practice of body manipulation:

Biotech is not to be confused with bioengineering or prosthetics; that is, biotech is not about interfacing the human with the machine, the organic with the nonorganic. Rather, biotech is about a fundamental reconfiguration of the very processes that constitute the biological domain and their use toward a range of ends, from new techniques in medicine to new modes of agricultural production, and to deterrence programs in biowarfare.<sup>43</sup>

Rather, biotech forces the use of relationality in generating new, hyper-biological bodies.<sup>44</sup> The threat concerns our ignorance of how biotech uses this relationality. In biotech practice, biological is more biological, while what is considered to be natural is even more natural. Bodies are to be purified from diseases, given new imperceptible, yet sustainable capacities so that every enhancement becomes the fulfilment of the dream of an already given idea. As Thacker explains, within biotech, the practice of relationality is done “by harnessing biological processes and directing them towards novel therapeutic ends.”<sup>45</sup> By implementing such processes of relations into given ideas, bodies are presupposed not as an event generated through relationality, but as encoded information, ready to be coded and decoded. A relational understanding of bodies is used here to manipulate such ideas as health, beauty and human dignity according to presupposed, fixed aims. Thacker calls this

<sup>42</sup> Gilles Deleuze, *Nietzsche and Philosophy*, trans. Hugh Tomlinson (London: Continuum, 2002), 39.

<sup>43</sup> Eugene Thacker, “Data Made Flesh: Biotechnology and the Discourse of the Posthuman,” *Cultural Critique* 53 (2003): 94–95.

<sup>44</sup> *Ibid.*, 86–88.

<sup>45</sup> *Ibid.*, 93.

“biotech informatic essentialism,”<sup>46</sup> which does not ignore the relational and processual nature of bodies, but primarily uses the relational nature of bodies to maintain desired identities, hierarchies and values.

In other words, when used within fixed frames of identity and its desires, relationality loses its transformative capacity. When we put bodily relations and processes into practice in a way that governs those bodies, rather than creating and experimenting with their capacities, then the old hierarchies, ideas and power structures are strengthened. Affect, understood as relations of transformations, when unspecified and misused, may thus strengthen essentialism. Rather than experimentation by creation of the spaces of relationality, affect might be a tool for fulfilling given ideas through the fixation and identification of bodies. While I have already outlined the basic understanding of affect – as transformative and contaminating relations – to understand its profound implications and the importance of its use, a closer analysis of affect as an analytical and yet practical tool is urgent. I argue that in order to understand the implications of affect, that is, bodies within affect, in a way that would not follow essentialist presuppositions, as specified by Thacker, it is crucial to familiarize ourselves with the conceptual history of affect and why it was introduced into the philosophy in the first place. In order to analyse relationality beyond Thacker, I return to Spinoza’s writings on affect.

Spinoza’s understanding of affect outlined in *Ethics* reveals the particular animality of relationality that is imperative in my study of bodies within affect. In the next section, I will focus on the main characteristic of affect as discussed by Spinoza and examine how it was rewritten in Deleuze’s study, in which affect is argued to be (a) distinct from emotion; where it is discussed as (b) an encounter and movement of thought and body; and where affect is (c) expressive – it not only happens between bodies, but it also generates those bodies. In this way, by focusing on these three characteristics, the delineation of the implications for the practice of affect will become clearer.

## 2.4a Affect: *Affectus* or *affectio*?

Within the contemporary use of affect there is much confusion about what affect is. Affirmatively applied within cultural and political studies, the notion of affect is usually without a firm distinction and specification. The word “affect” is treated interchangeably with emotions, with the state of the body and the body’s power for action. At the same time, affect when used as synonymous with affection can mean being against representation and identification and instead imply more embodied approaches of analysis and understanding.

However, as Deleuze has already remarked, this confusion derives from the wrong definition and interchangeable use of two terms that Spinoza distinguished from each other:

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<sup>46</sup> *Ibid.*, 92.

*affectus* and *affectio*.<sup>47</sup> Indeed, when we look, for instance, at the translation by Samuel Shirley of a passage from Spinoza's *Ethics* in Part III, Definition 3, the terminological confusion begins:

By emotion I understand the affections of the body by which the body's power of activity is increased or diminished, assisted or checked, together with the ideas of these affections. Thus, if we can be the adequate cause of one of these affections, then by emotion I understand activity, otherwise passivity.<sup>48</sup>

The same passage is translated by W. H. White and A. H. Stirling as:

By affect [in Latin: *affectum*, II declination Acc. from *affectus*] I understand the affections [*affectiones*, III declination Acc. plur. from *affectio*] of the body, by which the power [potentia] of acting of the body itself is increased, diminished, helped, or hindered, together with the idea of these affections [*affectionum*, III declination Gen. plur. from *affectio*]. If therefore, we can be the adequate cause of any of these affections [*affectionum*], I understand the affect [*affectum*] to be an action, otherwise it is a passion.<sup>49</sup>

White and Stirling, like Deleuze, notice Spinoza's differentiation regarding *affectus* and *affectio*, and translate *affectus* as affect and *affectio* as affection. The translation of the word *affectus* as emotion is unfortunate and misses the meaning of the word *affectus* as used by Spinoza. The etymology of the word "emotion" refers to the Middle French *esmocion*, *esmotion*, *emotion* (French *émotion*) and Latin *moveo*. *Emotion* denotes "civil unrest, public commotion," "agitation of mind, excited mental state, movement, disturbance,"<sup>50</sup> and *moveo* that means "to move, stir, set in motion, shake, disturb, remove."<sup>51</sup> However, the word emotion also refers to "strong feelings, passion; (more generally) instinctive feeling as distinguished from reasoning or knowledge,"<sup>52</sup> and, as such, was used, for instance, by Descartes to describe the motion of spirit that agitates and disturbs the thoughts.<sup>53</sup> The distinction between affect and emotion becomes clearer, however, and also important for

<sup>47</sup> Gilles Deleuze, "Lecture on Spinoza at Vincennes in 24.01.1978," trans. Timothy S. Murphy, webdeleuze, <https://www.webdeleuze.com/textes/14>, accessed 24 April 2017.

<sup>48</sup> Spinoza, *Ethics*, in *Spinoza. Complete Works*, 278.

<sup>49</sup> Baruch Spinoza, *Ethics*, trans. W. H. White and A. H. Stirling, (Ware: Wordsworth Editions Ltd, 2001); In brackets are the Latin terms used in this passage by Spinoza, see *Spinoza: Works in Latin*, <http://users.telenet.be/rwmeijer/spinoza/works.htm>, accessed 11 September 2015.

<sup>50</sup> "Emotion, N.," OED Online (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/61249#eid5521328>, accessed 17 September 2015.

<sup>51</sup> "Charlton T. Lewis, Charles Short, A Latin Dictionary, Mōvĕo," <http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.04.0059%3Aentry%3Dmoveo>, accessed 24 April 2017.

<sup>52</sup> "Emotion, N."

<sup>53</sup> René Descartes, *The Passions of the Soul* (Hackett Publishing, 1989), 338–39.

our further understanding of relationality of affect, when looking at Deleuze's distinction between *affectus* and *affectio*.

In the lectures on Spinoza at Vincennes on 24 January 1978,<sup>54</sup> in order to signal the importance of the distinction between *affectio* and *affectus*, Deleuze introduces the relation between *affectus* and an idea. He asks: "what is an idea?" As he further explains: an idea "is a mode of thought which represents something. A representational mode of thought." Affect (*affectus*), for that matter, is a "mode of thought which does not represent anything." Deleuze adopts Spinoza's causal understanding of affect, where *affectus* is positioned alongside the word *transitio* [*Ethics*, III, P59S]. The Latin *transitio* refers to "going across or over, a passing over, a passage."<sup>55</sup> *Affectus* "refers to the passage from one state to another,"<sup>56</sup> and, as such, Deleuze argues, it is purely transitive and therefore cannot indicate or represent something.

*Affectio*, on the contrary, is a kind of an idea. The Latin *affectio* means "a change in the state or condition of body or mind, a state or frame of mind, feeling."<sup>57</sup> It is an effect of a body acting upon another body. Moreover, because every action of a body involves contact with another, it always leaves a trace [*Ethics*, II, P17]. When *affectio* is translated as affection, it refers to the state of a body that has undergone a transformation. As such, affection becomes "a mixture of bodies" – with one body acting and leaving traces of this action upon another body. Importantly, as a kind of idea, *affectio* is already a particular state of the body. It thus involves a representation and identification of the act of transformation, from which it is, nevertheless, never separated.

For Spinoza, the distinction between *affectus* and *affectio* has crucial implications for our understanding of how we acquire knowledge about bodies. My argumentation also reveals the particular importance of relationality when thinking with affect. However, before we delve deeper into this, it is imperative to look closer at what Spinoza considers as knowledge with regard to the sense of *affectio* and *affectus*.

According to Spinoza, affection (*affectio*) does not result in "true" knowledge. If it constructs knowledge, it regards only "the nature of the modified body," and not the body that it is modifying. In other words, we know only the results of the body's action, which we can observe in the changed state of the other's body. *Affectio* does not, however, elicit the explicit cause of this change – the exact nature of the acting body. Consequently, Spinoza considers affection to construct inadequate knowledge: "the ideas we have of external bodies indicate the constitution of our own body rather than the nature of external bodies" [*Ethics* II, P16, C2].<sup>58</sup>

<sup>54</sup> Deleuze, "Lecture on Spinoza at Vincennes in 24.01.1978."

<sup>55</sup> "Charlton T. Lewis, Charles Short, A Latin Dictionary, Transitio," <http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.04.0059%3Aentry%3Dtransitio>, accessed 24 April 2017.

<sup>56</sup> Gilles Deleuze, *Spinoza: Practical Philosophy*, trans. Robert Hurley, 1st in English edition (San Francisco: City Lights Publishers, 2001), 49.

<sup>57</sup> "Charlton T. Lewis, Charles Short, A Latin Dictionary, Affectio," <http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.04.0059%3Aentry%3Daffectedio>, accessed 11 September 2015.

<sup>58</sup> Spinoza, *Ethics*, trans. W. H. White, 63.

By adequate knowledge, Spinoza means understanding all causes and determinations. However, due to our finite mode of existence – our mortality – all that we can perceive is the result of another body's actions; that is to say, we can only perceive affections of affects. Thus, we can only come close to an adequate knowledge, the knowledge of all causes, through what Spinoza calls “common notions.” Common notions are things that are common among other bodies, such as the sense of extension, motion and rest [*Ethics* II, P38, P39]. However, how can we gain these common notions? How can we grasp what is common among bodies? According to Spinoza, we cognize common notions during encounters with other bodies. Only through relations with other bodies can we perceive what is common with our body: “the more things the body has in common with other bodies, the more things will the mind be adapted to perceive”<sup>59</sup> [*Ethics* II, P. 39, Corollary]. In other words, to acquire adequate knowledge, the common notions, we must experience multiple connections, encounters with other bodies – we must experience various affects. The more relations (*affectus*) we experience, the closer we come to the generation of adequate knowledge.

Careful reading of Spinoza's differentiation between *affectio* and *affectus*, between relations and the ideas or states of bodies resulting from these relations, allows us to acknowledge the importance of relationality between bodies. Although our knowledge about bodies is anticipated by ideas about those bodies (affections), through encounters with other bodies (affects), we can overcome the stability of affection and come closer to what Spinoza considers adequate knowledge. In this way, the particular *affectus*–*affectio* relation is not based on determination. Affects cannot be determined by affections. To put it differently, our relations with other bodies cannot be determined by our ideas about those bodies. AOO's performative experiment analysed earlier in this chapter tacitly exercises this indeterminism: we may have an idea of a horse and a human body, we may also have an idea about the principles and laws that determine the cause of the experiment; however, exactly what happened during the encounter between these two bodies, the dynamic intensity between the artist's body and the horse's blood, remain indifferent to the given representations. This is what Deleuze meant by the exteriority of relations. He indicated the need to enter a relationship for the sake of stepping away from the modes of fixed states of bodies. The sphere of relation is the sphere of encountering what bodies can do, a sphere where the movement of bodies' power as *potentia* is at work.

Affect is a passage, a transition between bodies and it should be understood as a dynamic movement. Indeed, it cannot be captured and defined in terms of properties, since then we would presuppose its characteristic to be of that of a state or of an idea. Precisely this falling into representation while losing the dynamism of an encounter happened to the artists of AOO when they wanted to capture that which could not be captured in their experiment. When the artists tried to seize the intensities of the encounter between two bodies by extracting the mixed blood into the Petri dish, it resulted in the blood coagulating. The

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<sup>59</sup> *Ibid.*, 78.

dynamic and violent character of blood transformation resulted in its destruction in the moment of identification, and even the artists that participated in this experiment could not control the event of transformation with their desire to commodify it into a given object. However, what is crucial for our understanding of affect is not the fact that we cannot capture it, but rather that, because we cannot capture affect in the form of a given object or idea, it forces us to take a different approach – it implies different tools of practice.

Because, as Spinoza argues, “bodies are distinguished from one another in respect of motion and rest, quickness and slowness, and not in respect of substance”<sup>60</sup> [*Ethics*, II, P13, Lemma 1], affect implies a different approach, one not based on the sense of identity and properties of things. Affect, as the relational way of being of bodies, involves a sense of the difference between bodies, which necessarily renders a relational understanding of the body. Moreover, the relationality of affect not only regards the way of being of bodies, but also bodies’ continuous determination by relations with other bodies: “A body in motion or at rest must be determined to motion or rest by another body, which was also determined to motion or rest by another, and that in its turn by another, and so on ad infinitum”<sup>61</sup> [*Ethics*, II, P13, Lemma 3]. Finally, the notion of affect that determines the relational nature of bodies, also determines the relational character of knowledge about bodies – it is a determination resulting from ongoing and multiple encounters.

In order to know the body, we must first understand how bodies act and relate to other bodies. This was an unusual statement during Spinoza’s era, since all bodily states and relations were generally considered to contradict Nature and were the result of a weak human disposition. However, on the basis of his monism, where *res extensa* and *res cogitans* are the one substance, the one thing, albeit expressed in different ways [*Ethics*, II, P21, P7S], Spinoza argues that all human conduct and affects, rather than being essentially different from Nature and even contradictory to Nature [*Ethics*, III], belong to the power of nature. Spinoza thus introduces an understanding of bodies that is based on the degree of movement and rest, and the capacity for movement and rest. Knowledge involves bodies’ adaptability within affects as *affectus*; in other words, it becomes a movement of transformative encounters [*Ethics* II, P13, S]. It is, therefore, invalid to search for essence or identity in our bid to understand bodies, as this will only lead us to a body state that contradicts body’s continuous changes and transformations. Such a definition of affect implies a different practice, one that focuses on mapping and experimenting encounters.

#### 2.4b Good and bad encounters

Affect can not only be mistaken for emotion, it can also be considered as having a fixed set of relations that correspond to all bodies. In order to appreciate the necessity for relational thinking when considering the relationality of affect, the study of kinds of relations and their movements is therefore crucial.

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<sup>60</sup> *Ibid.*, 58.

<sup>61</sup> *Ibid.*

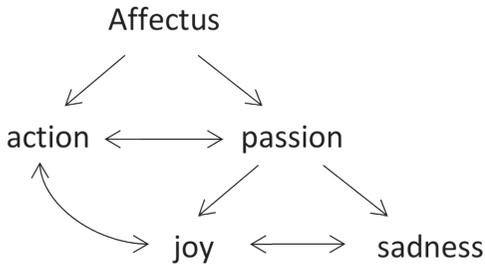


Figure 12. Diagram representing the kinds of encounters as described by Spinoza.

Drawing by A. A. Wołodźko.

Described in terms of causes, Spinoza distinguished two kinds of encounters–affects: passions and actions [Figure 12]. Passions originate outside one’s body and, therefore, we can only know their inadequate cause since its effect, although perceived in our body, cannot be definitely traced and fully determined. Actions, on the other hand, are affects originating in our bodies. They constitute an adequate cause, because their effects are clearly distinguishable and perceived. However, unlike passions, actions are rare. Moreover, because of humans’ finite mode of existence, it is impossible to fulfil their requirement for exhausted knowledge. Full understanding is a characteristic belonging only to God, Nature or Substance – Spinoza treats all three interchangeably. However, as I elaborated in the previous section, we can come closer to gaining adequate knowledge by initiating and multiplying our encounters with bodies.

When bodies in relation agree with each other, when bodies agree with their *conatus* (agree with their drive to life), they construct a third relation that preserves both their *conatus*, [Ethics, IV, P31, P38, P39]. These encounters can be called good affects. Despite being passive and thus constructing inadequate knowledge, they positively influence one’s well-being, because they preserve, rather than destroy body. These are the passions that Spinoza calls joy.<sup>62</sup> Even if Spinoza considers passions to generally diminish our power to act, the passions of joy involve some degree of action. The joyful passions preserve our drive to life and therefore increase our power to act. In this account, when passions agree with our *conatus*, they produce joy, increase our power, or even encourage us to prolong this relation. Thus, our desire comes not from being passive, but comes from our *conatus*, our drive to increase our power in order to act.<sup>63</sup> When the body in relation cannot be combined with the other, when relations disagree with each other, this is considered to be a bad encounter, in the sense that, rather than preserving a body’s *conatus*, it destroys it or harms it. It thus reduces the body’s power to act. Spinoza calls such bad encounters sad passions.

<sup>62</sup> Gilles Deleuze, *Expressionism in Philosophy: Spinoza*, trans. Martin Joughin, 1st edition (New York/ Cambridge, MA: Zone Books, 1992), 239.

<sup>63</sup> *Ibid.*, 240.

Encounters between bodies generate intimate and risky relations that may have unequal results for different bodies. Hence, Caccavale's project becomes crucial when looking to understand the implications of affect's relationality. Caccavale created ways of being in an allied relationship with the pig. His visualization of relationality and new ways of practicing it had a partially human perspective – they were driven by passion. Moreover, because the *Utility Pets* served more humans than the pig, and the preservation of human life presupposed the death of another animal life, the relationality that we encounter in this case oscillates around sad passion for the pig and semi-joyful passion for the human – prolonging life, yet not without the human feeling a sense of remorse and loss. The intensity of this vibration between joy and sadness is undoubtedly fostered by the blurred boundary between the two species. Nevertheless, this human-pig asymmetrical relation generates a unique way of life that transforms what both a pig's and a human's body might do. The *Utility Pets* literally feed on the dynamic and blur the distinction between actions and passion, and the necessity to explore multiple, complex, awkward and “weirding” relationality in order to understand what it would be like – that is to say, what the implications are of blurring the boundary between species – to practice animal relationality.

The practice of relations between pig and human in Caccavale's speculative project, albeit from only one, human, perspective and with a fatal ending for the pig, produced a mutual alliance that enriched both lives – this is what Spinoza would call joyful passion. Even though it may only be partial (because it does not result in full knowledge about its cause and it ends with the death of one of the bodies), the human-pig relation produces new experiences. By mapping of these multiple relations, Caccavale creates new understanding about what human-pig bodies may do and how they might co-exist. Spinoza would have considered both of the passive encounters in this case to have been carefully studied, regardless of their relation to the degree of power. The very act of comprehending passions, regardless of whether they are sad or joyful, leads us to knowledge of their causes, which, eventually, transform our passivity into activity. Neither joyful, nor sad relations are fixed and given, and each encounter, due to its dynamic and transformative character, constantly shifts and transforms not only the bodies, but the relations themselves.

Moreover, Spinoza's clear distinction between sad and joyful passions does not mean that they are inherently separate. Joyful and sad passions constantly intermingle.<sup>64</sup> This is due to the fact that we are partially and particularly involved in relations that determine our bodies and actions. Our existence is affected by other bodies, and is already accommodated by them.<sup>65</sup> Most importantly, as Deleuze concludes, there is no opposition or essential dualism between passive and active affects. We can increase our power through joyful passion, but, simultaneously, sad passion can block this increase; despite this, the latter still exercises the power to act, albeit in the lowest degree. We can reinforce our activity of knowing by multiplying relations. Only through encounter can we understand which bodies agree with

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<sup>64</sup> *Ibid.*, 244.

<sup>65</sup> *Ibid.*

each other or not and what their capacities and functions are. In this sense, Spinoza outlines what the notion of transformation through affect might be. As Genevieve Lloyd puts it:

Through understanding the affects, replacing the inadequate ideas they initially involve with more adequate ones, we do not simply retreat from the turmoil of passion into a realm of thought. The affect itself is transformed from a passion – an inadequate idea of a transition to a greater or lesser state of activity – to an active rational emotion, incorporating an adequate idea.<sup>66</sup>

Since to understand the body is to know what the body can do, what are its capacities and functions, knowledge about passion has a transformative character. Importantly, in the encounter that transforms bodies neither body nor mind has a priority: “for what the body can do no one has hitherto determined, that is to say, experience has taught no one hitherto what the body without being determined by mind, can do and what it cannot do from the laws of nature alone, in so far as nature is considered as corporeal,”<sup>67</sup> [Ethics, III, P2 Scholium]. Spinoza considers passions to be the flows of rest and motion that are both mental and corporeal. These ‘passive’ affects, although they constitute the source of inadequate knowledge, can bring understanding about the cause of things and, consequently, understanding about our bodies. Hence, instead of characterizing the juxtaposition of thinking/mind and affected/body as a problem of how the two can communicate, Spinoza outlines the corresponding nature between mind and body. For Spinoza’s contemporary Descartes, for instance, passions, as the passive feelings of a body, were not only opposite to the active mind, but also prone to the mind’s control, because they did not reflect Nature’s majesty.<sup>68</sup> Spinoza’s monism, however, rejected Descartes’ dualistic approach on the grounds of ontological egalitarianism and a reciprocal relationality between what was considered mind and body.

The binary relation of body-mind, even though harmonious, presupposes a hierarchical moral order that requires one to surrender for another to succeed. Spinoza breaks the hierarchical order of faculties with his notion of parallelism (which should be read as a unity), because the passions of the body are also the passions of the mind [Ethics III, P2 Scholium]. Neither body, nor mind is separate from each other, but rather they are simultaneous. There is thus no harmony based on the dialectical structure of action and passion, thesis and antithesis, joy and sadness. There is no transcendence that allows for action or finality. Instead, Spinoza thinks about relationality in terms of not only the material encounter of bodies and corporeal generation of meaning, but also in terms of an encounter characterized by continuous risk and doubt. To encounter the body means

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<sup>66</sup> Genevieve Lloyd, *Part of Nature: Self-Knowledge in Spinoza’s Ethics*, 1<sup>st</sup> edition (Ithaca, NY: Cornell University Press, 1994), 86.

<sup>67</sup> Spinoza, *Ethics*, trans. W.H. White, 101.

<sup>68</sup> Descartes, *The Passions of the Soul*.

generating meaning about this body, without prior knowledge of its full capabilities. The transformative capacity of relationality is thus a creation that regards both incorporeal truth and corporeal body as something that needs to be continuously mapped and experimented with.

We do not know in advance which relations are bad and which might, ultimately, be joyful, i.e. which relations can lead us to action and which can diminish our understanding. We must first create the conditions for a new relationality to emerge. The short analysis of Spinoza's use of affect demonstrates that affect is something to be considered as neutral – something that incorporates bad as well as good encounters, which are never arbitrary, but rather situated. We do not know in advance which encounter will be good or bad; therefore, we must experiment, to see what happens first. Even then, the observation might shift. What for one body appears to be good and joyful, may be destructive for another. Affect implies the continuous process of experimentation and mapping relationality. The understanding of affect as *affectus* inevitably leads to a particular understanding of ethics. Within thinking with *affectus*, ethics becomes the practice of learning how to secure the spaces that allow relationality to occur. This particular understanding of ethics will be explored later (Chapter 5). For now, the last crucial characteristic of affect as *affectus* awaits.

### 2.4c Affect as expression

Why would someone want to inject another species' blood into their own body? When AOO performed their experiment of becoming with the horse, rather than the struggle to express and represent some given sense of an idea about what the body is, their approach focused on the conditions of that particular practice: how to shake the fixed border between the bodies? The processes of experimentation as encounter that affect embodies focuses on the conditions of creation, on how to secure the spaces that allow relationality and contamination to occur, and how to continue relationality's transformative movements. This different logic, which *affectus* implies, presupposes a search for genesis, for conditions that allow an encounter to have a generative rather than a representative capacity. Affect, as such, constitutes the ontological condition of bodies – expression through relation.

Expression here has a particular meaning, which Deleuze devoted an entire book to when discussing the philosophy of Spinoza.<sup>69</sup> I cannot do justice Deleuze's analysis of expressionism in Spinoza here, so I will focus on a particular element of his analysis, which will help our understanding of affect's distinct sense of relation that not only connects bodies, but also generates transformation of those bodies.

Deleuze characterizes Spinoza's immanent philosophy as the philosophy of expression. On the basis of Spinoza's monistic philosophy, which is based on the presupposition of one substance that is infinitely actualizing itself, all that is, is an expression of that substance. In

<sup>69</sup> Deleuze, *Expressionism in Philosophy*.

addition to the concept of Substance, Spinoza distinguished modes and attributes. For our purpose, i.e. understanding the generative character of affect, it is important to consider how Deleuze explains those modes and attributes, since scholars are not definite in this matter and fail to take into account the generative capacity of affect.<sup>70</sup>

Deleuze clarifies Spinoza's differentiation of *propria* (modes) and attributes as a relation between these adjectives that which give no substantial knowledge, and verbs that express qualities and essences.<sup>71</sup> *Propria* thus belong to the structure of sign and signified, while attributes to expression and expressed: "A sign always attaches to a proprium; it always signifies a commandment; and it grounds our obedience towards it. Expression always relates to an attribute; it expresses an essence, that is, a nature in the infinitive; it makes it known to us."<sup>72</sup> Deleuze describes the expressive character of attributes as affirmative. Affirmation means that attributes do not need the logic of identification in their relation of expression. Identification is based on negativity and opposition – in order for something to be perceived you must use the logic of comparison, based on what it is not.<sup>73</sup> As Deleuze explains, attributes express rather the essence of substance in a way that constitutes substance growth and dynamic nature.<sup>74</sup> Nevertheless, the notion of expression as an indication of transformation becomes more apparent for our purpose when we consider how Deleuze distinguishes Spinoza's expression from the concept of participation.

Deleuze refers to Plato to outline three meanings of participation: material (to be part of something), imitative (to imitate), and demonic (to receive something from a demon).<sup>75</sup> In all cases, participation was constructed from the perspective of being outside of the relation of participation. That is to say, as observers, we either do not see divisions, or we possess some prior idea or model on account of which we grant imitation.<sup>76</sup> Thus, according to Deleuze, a post-platonic notion of participation is an inversion of Plato's perspective, i.e. a shift from an outside perspective to an inside one. This inside perspective on participation

<sup>70</sup> See the extensive analysis of the difference between Deleuze reading of Spinoza's expressionism and the usual reading through the philosophy of Hegel and Descartes: Simon Duffy, *The Logic of Expression: Quality, Quantity and Intensity in Spinoza, Hegel and Deleuze*, (Aldershot/ Burlington, VT: Ashgate Publishing, 2006).

<sup>71</sup> Deleuze, *Expressionism in Philosophy*, 50–55.

<sup>72</sup> *Ibid.*, 57.

<sup>73</sup> *Ibid.*, 60.

<sup>74</sup> *Ibid.*, 80–81; On the analysis of the univocity of the Substance and attributes, of what is universal and singular or what Spinoza also calls *natura naturans* (Nature, Substance, God) and *natura naturata* (nature, modes, bodies) see Audrey Wasser, "Deleuze's Expressionism," *Angelaki* 12, no. 2 (1 August 2007): 49–66; Using Deleuze's concept of difference, Wasser elaborates on the transformative capacity of the expressionism and the capacity of immanence to generate the new while avoiding determinacy; for the further study of the expression that is determined by difference see Deleuze, *Difference and Repetition*, 40–41.

<sup>75</sup> Deleuze refers here to Plato's notion of a demon, which Plato described as a demiurge, creator, craftsman of the universe, see Plato, *Timaeus and Critias*, trans. Robin Waterfield, 1<sup>st</sup> edition (Oxford/New York: Oxford University Press, 2009).

<sup>76</sup> Deleuze, *Expressionism in Philosophy*, 169.

focuses on genesis or production. It is a triad of giver, given and recipient, which Plotinus called an emanation: “To participate is always to participate through what is given.”<sup>77</sup>

When we look at participation from an outside perspective and with regard to Spinoza’s understanding of expression, it fails to meet the requirement of immanence. Hence, emanation, rather than participation, seems to be logically much closer to immanence. When defined causally, as Deleuze does, within emanation there is a production of which causes remain in themselves. The difference between emanation and expression lies, however, in the way both “systems” produce things. In immanence, cause and effect remain in themselves. In emanation, although the cause is immanent, the effect transcends its causes: “The emanative cause produces through what it gives, but is beyond what it gives.”<sup>78</sup> There is inscribed exclusion in emanation and, as Deleuze argues, it contradicts the affirmative nature of immanence. Emanation presupposes the exclusion and hierarchical superiority of its effects.

The exclusion of participation and emanation when thinking about expressionism leads Deleuze to the final characterization of expression as immanence. The notion of expression presupposes unity as a property of substance – an equality of being that implies no hierarchical structures. From such characteristics of expression, which generates but also transforms bodies, the sense of relationality appears to be messy, full of surprises and risks. Relationality demands a constant negotiation and experimentation.

The significance of Spinoza’s philosophy, according to Deleuze, lies in the immanence that releases expression from representation and subordination. As such, it equates being with knowing, which Deleuze calls expressive knowledge.<sup>79</sup> Therefore, in his introduction to the third part of *Ethics*, Spinoza writes that we should not “bemoan, laugh at, mock, or, as is more generally the case, detest”<sup>80</sup> affects; rather, through its study, we can truly possess an understanding of them. Thus, the concept of affect as *affectus* becomes, for Spinoza, an attuned relational way of gathering and forming bodies. He combines and relates his understanding of affect with a sense of agency, causality and knowledge about bodies,<sup>81</sup> allowing us to consider the material and generative implications of relationality, where to know is to materially participate in something.

This material participation in bodies’ relationality and transformation pervades the work of AOO and Caccavale discussed in this chapter. AOO and Caccavale were already working with affect, yet in a non-specified, non-defined way. They were creating spaces of encounter, of relationality, to create a sort of experimentation, to test what bodies can do, even without us, other participants, knowing about it. It might, therefore, be argued that the

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<sup>77</sup> Ibid., 171.

<sup>78</sup> Ibid., 172.

<sup>79</sup> Ibid., 183.

<sup>80</sup> Spinoza, *Ethics*, trans. W.H. White, 97.

<sup>81</sup> The third chapter of this book is devoted to the material notion of meaning that affect implies.

whole philosophical clarification of affect and its importance is meaningless in the face of more tangible artistic endeavours that directly experience relationality.

However, such a conclusion of priority of practice over theory immediately positions me in the dualism of faculties and experience that the relationality of affect undermines. To practice affect is also to change the way of thinking about affect, about bodies and the relations it transforms and generates. Without bioart encounters, we would not have created and experienced the intensity of animal relationality as exercised by AOO and Caccavale. But without Spinoza's *affectus*, I would not have been able to point to and formulate that experience either. Affect as *affectus* implies immanence of thought and practice, but also their mutual and constant negotiation. To live within affect, to practice bodies within affect, demands the shaping and securing of spaces that facilitate such negotiations and experimentation.

The animality of affect can be understood through actual participation, an alliance with a mutating body, with its movements, flows and messiness and openness to continuous transformation and rethinking of ways to achieve this. However, beware, one never stays the same after engaging in such contaminating relations – one transforms and mutates expressing the relationality of continuous contaminations.

## 2.5 Facing Critique of Affect

Despite the Spinoza-Deleuze perspective on affect as transformative relationality, as previously mentioned, affect has mainly been analysed as *affection* – as a state of a body or an idea of that state, such as an emotion.<sup>82</sup> The importance of affect for a wider understanding of how bodies relate and what this relation might be, has frequently been subordinated to the psychological study of emotions. As *affectio*, the study of affect survived mostly along the lines of Cartesian argumentation, in which, given its presumed subjectivity, affect is considered to necessitate repression or control by the mind for the sake of the validity of knowledge.<sup>83</sup> Moreover, a significant criticism of affect has emerged, which has mapped a particular form of its development. This lack of differentiation between affect and emotion undermines and questions the possible implementation of affect within humanistic theory, which is concerned with the wide cultural, political and social implications of bodies' relationality.

<sup>82</sup> See the multiple takes on affect, which, although they acknowledge existing discourses on differentiations, tend not to distinguish between affect, emotion, feeling and pre-cognitive response: Charles Altieri, *The Particulars of Rapture: An Aesthetics of the Affects* (Ithaca, NY: Cornell University Press, 2003); Teresa Brennan, *The Transmission of Affect* (Ithaca, NY: Cornell University Press, 2004); Eve Kosofsky Sedgwick, *Touching Feeling: Affect, Pedagogy, Performativity* (Durham, NC: Duke University Press Books, 2002); Sianne Ngai, *Ugly Feelings* (Cambridge, MA: Harvard University Press, 2007).

<sup>83</sup> For a critical analysis of the 'affective turn' in philosophy see Marguerite La Caze and Henry Martyn Lloyd, "Editors' Introduction: Philosophy and Affective Turn," *Parrhesia* 13 (2011): 1–13.

The inability to distinguish between relations of transformations and those that strengthen ideas of identification tends not only to perpetuate old hierarchies between bodies, but also leads to the critique of any attempt to express and prolong its transformations. For this reason, Shannon Bell, when writing about the Paul Virilio concept of extreme art, compared the performance of, among other works of bioart, “May the Horse Live in Me,” to the “manifestations of the accident of art [...] [that] came into being as a response to war and to its spectacle of terror and shock value, which has only increased in speed and intensity.”<sup>84</sup> Considering Virilio, who defines art’s relationship to science as “the expressionism of a MONSTER, born of the labour of a science deliberately deprived of a conscience [...] not a literary or artistic genius anymore, but a GENETIC GENIUS,”<sup>85</sup> bioart, in particular, appears as the spectacle of fear before the monster. Once defined as a deviation from something, as the idea of fear, affect as relations of transformations becomes neglected and caricaturized as a mere spectacle of curiosity, deviation from norm, from that which is considered to be fixed. As Virilio cries:

the hybridization of man and animal. How can we fail to see that these ‘scientific extremists,’ far from merely threatening the unicity of the human race by trafficking embryos, are also taking their axe to the whole philosophical and physiological panoply that previously gave the term SCIENCE its very meaning?<sup>86</sup>

Moreover, the main argument against the use of the concept of affect presupposes the necessity of maintaining not merely bodily-species “purity”, but also, fixed disciplinary divisions. Arguments against the use of affect revolve around the alleged appropriation of neuroscientific findings for humanistic aims and research. In the struggle to find some communication between science and the humanities, Constantina Papoulias and Felicity Callard suggest that affect is a part of what they call a “spontaneous philosophy.” “Spontaneous,” in this sense, implies a simplification of complex neuroscientific theories in order to ensure the significance and actuality of one’s theoretical claims. The difference in the understanding and use of affect between disciplines is often thought to create more problems than it solves. For instance, in neurobiology and developmental psychology, affect is studied as a part of a regulatory system that assures the formation of coherent relations between individuals. When affect is used as “a placeholder for the inherent dynamic and

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<sup>84</sup> Shannon Bell, “Accident of Art,” in *The Virilio Dictionary*, ed. John Armitage, 1st edition (Edinburgh: Edinburgh University Press, 2013), 21.

<sup>85</sup> Paul Virilio, *Art and Fear*, trans. Julie Rose (London, New York: Continuum, 2004), 50; capitalization in original.

<sup>86</sup> *Ibid.*, 51.

mutability of matter”<sup>87</sup> in philosophical and cultural analysis, it is said to significantly contradict science.<sup>88</sup>

However, within the concerns of this book and the relational matters of affect already discussed in this chapter, it is necessary to confront the critique of affect that draws upon Spinoza-Deleuze readings.<sup>89</sup> Under particular scrutiny is Brian Massumi, who actualizes Deleuze’s philosophy in his *Parables for the Virtual: Movement, Affect, Sensation*, already a canonical text for the affective turn.<sup>90</sup> Perhaps the most significant argument against Massumi’s notion of affect is his idea of the autonomy of affect and his appropriation of science in understanding this autonomy. Before moving to particular arguments, it is necessary to examine Massumi’s reading of affect more closely.

Following Massumi’s description, within cultural theory, affect introduces the notion of intensity to encounters between bodies. In his concept of the autonomy of affect, he tries to overcome the dominion of structures based on discourses that firmly rely on qualified identities, points of reference and representations. He develops an understanding of affect as an intensive expression-experience-based event.<sup>91</sup> In this sense, he follows Spinoza-Deleuze’s use of affect as affectus. Here, affect is translated and used as a passage between states, in contrast to the psychological use of affect as affectio – as a state of bodies’ fixed disposition, such as emotion or feeling. For Massumi, affect as affectus is autonomous from the states of bodies, thus from affection. Affect’s autonomy is not just a methodological call to overcome the discursive and linguistic methodology of “cultural-theoretical vocabulary,” dominated by the theories of signification, characteristic of the notion of *affectio*.<sup>92</sup> Most of all, Massumi argues for a way of thinking and acting that is independent from linguistic signification. When he writes about the autonomy of affect as an openness to relations and as a dissimulation of function, he refers to the a-signification of affect, a concept introduced by Deleuze and Guattari.<sup>93</sup> A-signification of affect means that affect does not carry meaning or function, but it is not entirely excluded from any semiotic characteristic either. Rather,

<sup>87</sup> Constantina Papoulias and Felicity Callard, “Biology’s Gift: Interrogating the Turn to Affect,” *Body & Society* 16, no. 1 (2010): 31.

<sup>88</sup> *Ibid.*, 39.

<sup>89</sup> Eugenie Brinkema, for instance, argues that the signification of affect within Deleuzian studies is too general and thus empty: “Deleuzians, with their emphasis on affect as a pure state of potentiality, tend to be particularly guilty of the sin of generality. This terminological lump risks the vagueness of purely negative definitional endeavors and largely cedes specificity—generic, emotional, historical—to cognitivists in literary and media studies, who have taken Aristotelian taxonomizing to heart in their ever-narrowing treatment [...] When affect is taken as a synonym for violence or force (or intensity or sensation), one can only speak of its most abstract agitations instead of any particular textual workings. Thus, the turn to affect has tended to make the same argument time and again—each a version of, “We urgently have to attend to X!” where X stands for a member of the set {excess, affect, sensation, embodiment, intensity, resistance, whatever}” in *The Forms of the Affects* (Durham, NC/London: Duke University Press Books, 2014), xviii.

<sup>90</sup> Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham, NC: Duke University Press Books, 2002).

<sup>91</sup> *Ibid.*, 27–28.

<sup>92</sup> *Ibid.*, 27.

<sup>93</sup> Deleuze and Guattari, *A Thousand Plateaus*, 75–78.

as creative and spontaneous, and having the capacity for transformation and change, affect generates new, non-linguistic meanings<sup>94</sup> that are not supported by a regime of cognitive semiotics grounded in the signifier/signified paradigm.<sup>95</sup>

Nevertheless, because of the characterization of affect as an encounter and experience, Clare Hemmings claims that Massumi's concept of affect is unable to confront social and political criticism.<sup>96</sup> Using Simon O'Sullivan's words, she argues that when you take seriously the idea that "you cannot read affects, you can only experience them,"<sup>97</sup> affect dissolves any critical, political and cultural potential for scrutiny. When affect can only be experienced and not be identified, it remains outside meaningful discourse.<sup>98</sup> We can conclude from such a claim, however, that any phenomenon that functions in the non-linguistic realm of experience is prone to socio-cultural meaninglessness. The problematic of such a conclusion is blatantly clear.

Ruth Leys similarly criticizes the presumed non-signification of affect due to its non-identifiable character. She draws consequences from Massumi's characterization of affect such as the automatic response that happens before consciousness as well as a sense of intentionality.<sup>99</sup> According to Leys, such a notion of affect renders one's existence as a barely reactive activity, cut off from complex socio-political contexts. Affect, when deprived of meaning, presupposes neuro-essentialism and a correlationist fixation on the subject's perception and perspective. Moreover, when affect is understood as an encounter that happens outside semiotic structures, it leads to the presupposition that we can think about meaning formation and generation only as a product of reflection and cognition, reinforcing, in turn, the old body-mind dualism.

Since Massumi wants to overcome the representational understanding of bodies by presupposing the non-reflexive and non-intentional notion of affect that generates bodies. He certainly appears to be close to strengthening dualism between body and mind. Affect, understood in terms of an automatic reaction of the body taking place below the threshold of consciousness, implies a radical break by the body with any sense of creativity and meaningful production. Here, therefore, Massumi would demonstrate that only the mind has a capacity for cognition and intention and that meaning occurs independently from the body's re-action.<sup>100</sup>

<sup>94</sup> Massumi, *Parables for the Virtual*, 35; See also Agnieszka Anna Wołodźko, "Materiality of Affect: How Art Can Reveal the More Subtle Realities of an Encounter," in *This Deleuzian Century*, (eds) Rick Dolphijn and Rosi Braidotti (Leiden: Brill, 2015), 171–173.

<sup>95</sup> Stephen Zepke, *Art as Abstract Machine: Ontology and Aesthetics in Deleuze and Guattari* (New York: Routledge, 2011), 121.

<sup>96</sup> Clare Hemmings, "Invoking Affect: Cultural Theory and the Ontological Turn," *Cultural Studies* 19, no. 5 (2005): 562–563

<sup>97</sup> Simon O'Sullivan, "The Aesthetics of Affect: Thinking Art Beyond Representation," *Angelaki: Journal of Theoretical Humanities* 6, no. 3 (2001): 126.

<sup>98</sup> Hemmings, "Invoking Affect," 563.

<sup>99</sup> Ruth Leys, "The Turn to Affect: A Critique," *Critical Inquiry* 37, no. 3 (1 maart 2011): 450–451.

<sup>100</sup> *Ibid.*, 456.

However, Massumi's understanding of affect relies on a differentiation between *affectus* and *affectio*. He reads the notion of affect in the sense of the word *affectus* – i.e. as a passage between bodies that is independent from the given states of bodies and their representation. He acknowledges that affect is not an affection. His understanding of affect presupposes the sense of relationality. Only through this profound understanding of relationality – relationality that draws heavily upon Deleuze's-Spinoza's understanding of the parallelism of body and mind – can he argue for the relational generation of bodies:

The autonomic tendency received second-hand from the body is raised to a higher power to become an activity of the mind. Mind and body are seen as two levels recapitulating the same image/expression event in different but parallel ways, ascending by degrees from the concrete to the incorporeal, holding to the same absent center of a now spectral – and potentialized – encounter.<sup>101</sup>

In this way, affect allows for a relational understanding of our bodies emerging within an encounter. In the event of an encounter, actions and passions are inseparable. Affect, within which bodies in relation emerge, becomes a middle ground:

Spinoza's Ethics is the philosophy of becoming-active, in parallel, of mind and body, from an origin in passion, in impingement, in so pure and productive a receptivity that it can only be conceived as a third state, an excluded middle, prior to the distinction between activity and passivity: affect.<sup>102</sup>

As Massumi stresses, the question of affect's potency lies not in the critique, but in the possibility of the new that results from a non-dialectical sense of relationality. His understanding of the autonomy of affect takes the shape of a radical openness to relations, rather than the fixation on a particular set of structures. He thus turns to the problem of genesis as a truly political and cultural issue:

The stakes are the new. For structure is the place where nothing ever happens, that explanatory heaven in which all eventual permutations are prefigured in a self-consistent set of invariant generative rules. Nothing is prefigured in the event. It is the collapse of structured distinction into intensity, of rules into paradox. It is the suspension of the invariance that makes happy happy, sad sad, function function, and meaning mean.<sup>103</sup>

<sup>101</sup> Massumi, *Parables for the Virtual*, 32.

<sup>102</sup> Ibid.

<sup>103</sup> Ibid., 27.

Even if some of the critical voices are significant, their concerns mostly relate to methodological clarity, which ultimately supports the disciplinary divisions and prioritization of epistemology over ontology. What such evaluations miss, despite their crucial and urgent concern for the specificity of the humanities, is the contaminating condition of affect that blurs any stubbornly posed demand for disciplinary divisions and purity.<sup>104</sup>

Massumi acknowledges his “shameless” reliance on science, and yet he emphasizes the need to pursue this ungrateful endeavour just for the sake of changing the humanities. He calls for reshaping humanistic methods and concepts, in order to find what is unique to the humanities. For him, affect opens a transversal journey where various findings and methods are juxtaposed in order to create transformative encounters: “The point, once again, is not to make the humanities scientific. The point is to borrow from science in order to make a difference in the humanities.”<sup>105</sup> Through his close reading of Deleuze-Spinoza, Massumi opens the possibility of relational thinking within cultural and political theory, drawing the possible line not only for the transformative and relational logic of thinking with affect, but also carving the radical implications of affect that this book undertakes – new modulating, mutating, animal understanding of how bodies and their understanding is produced and practiced when art, philosophy and science become continuously intermingling and challenging each other.

Instead of adopting the rhetoric of evidence in theoretical approach, I argue that the point is to change the questions that form the basis of our analysis. This shift in thinking can be established when we change the epistemological inquiry of ‘what can I know’ into ‘what must I do’ and ‘what can I hope.’<sup>106</sup> Such a shift from epistemology to ethology responds to the Deleuzian-Spinozian notion of affect as a relation and a passage. Here, affect becomes a method that is related to existence and action. Consequently, affect becomes a combined object and practice, where each of its components cannot be separated from each other.

Accordingly, while I agree with the arguments against the appropriation of psychological and neuroscientific facts in philosophical research, there has been a convenient omission of the relational and processual understanding of affect long before any of the mentioned branches of ‘hard science’ were established. However, simplification threatens to immobilize all that affect promises to carry. The fierce debate around the nature of affect and why it has become so important today influences its actual and conceptual practice. In contrast to this theoretical dialogue, I argue that bioart’s relational practice with contaminating materialities of bodies allows us to confront affect, where passions are inseparable from actions. Bioart’s experimental approach to the body offers a fresh and yet strangely familiar perspective on

<sup>104</sup> Papoulias and Callard, “Biology’s Gift,” 46–49.

<sup>105</sup> Massumi, *Parables for the Virtual*, 20–21.

<sup>106</sup> Alain Badiou, “Preface” in Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier (London/New York: Bloomsbury Academic, 2010), vii.

how affect as relation is possible in practice. Bioart generates actual consequences of its practices for thinking about bodies.

After all, Deleuze and Guattari already wrote on art's distinct potentiality for the generation of affects and percepts.<sup>107</sup> The question that bioart highlights, however, seems to be the result of a serious account of what Deleuze and Guattari signalled. It is the question that Spinoza asked and which, although urgent, remains unanswered and somehow lost in today's discussion on affect: how to act when we take seriously the *affectus* that generates our bodies? Today, this Spinozian understanding of agencies that collectively construct bodies and their multiple meanings marks the line of thinking and practice of affect that actually matters. Unlike in any other encounter, the actual consequences and implications of this relationality are exercised in artistic practice. Within bioart's practice, a radical shift in thinking happens, which means that rather than focusing on finding truths, on defining states of things, we are more concerned with genesis, conditions of creation and their implications.

## 2.6 Fabulations of Affect

Fabulate, v. ...to relate as a fable or myth...

To talk or narrate in fables...

To invent, concoct, fabricate.<sup>108</sup>

Affect deviates, induces change and contaminations and, as such, it becomes the creative capacity, albeit not without the risk of encountering the unknown and unpredictable. The creative capacity of affect as exercised in the discussed work of AOO and Caccavale, oscillates not between fiction and reality, between imagined and given, but, as Deleuze would say, "in the new mode of story."<sup>109</sup> This new mode of story, as later described by Deleuze and Guattari, is a "creative fabulation,"<sup>110</sup> that "exists only from the perspective of a series of powers, always referring to each other and passing into one another."<sup>111</sup> This creative fabulation of affect does not belong to memory;<sup>112</sup> as Deleuze argues, it does not follow the structure of identity, but rather that which is yet to come – the relations of transformations.

<sup>107</sup> Deleuze and Guattari, *What Is Philosophy?*, 163–169.

<sup>108</sup> "Fabulate, v.," *OED Online* (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/67410#eid4920006>, accessed 11 May 2017.

<sup>109</sup> Gilles Deleuze, *Cinema II: The Time-Image*, (Minneapolis, MN: University of Minesota Press, 1989), 155.

<sup>110</sup> Deleuze and Guattari, *What Is Philosophy?*, 171.

<sup>111</sup> Deleuze, *Cinema II*, 139.

<sup>112</sup> Deleuze and Guattari, *What Is Philosophy?*, 168–71; *Deleuze, Cinema II*, 131–42.

The particular relationality of fabulation, of relations that, rather than connect to what is already there, stretch out to shape new bodies, to create new paths, thus has an aesthetic dimension. Affect creates new sensations and new perceptions. To fabulate is to create. There is, however, something distinct that affect engenders when read with Spinoza and Deleuze, and as practiced within bioart. It can be argued, nevertheless, that we do not need a new concept of relationality when talking about art's practice, because we already have that in art theory. In particular, Nicolas Bourriaud's *Relational Aesthetics* (1998) opened a crucial discussion on the role of art as generation and production of meaning that allows us to think about relationality in art more clearly. I argue, however, that affect as practiced by bioart offers distinct implications for understanding the contamination of bodies that existing theories within art cannot grasp alone. Bourriaud's idea of relationality has been important not only for the analysis of art in the 1990s, but also for recognizing the line of transformations and challenges that practicing affect with bioart engenders. I will therefore briefly recall the main characteristic of relational aesthetics to further map the distinct and important implications of affect.

Within the phenomenon which he described as the commodification of human relationships into "standardized artefacts,"<sup>113</sup> Bourriaud asked whether it is still possible for art to generate relationships with the world. By following Guy Debord's the *Society of the Spectacle*, he argued for the universal mediation of human relationships through images. However, he did not follow Debord's focus on the individual. Instead, Bourriaud argued that the most important thing "in our post-industrial society" is not the emancipation of the individual, but the emancipation *from* the individual: "freeing-up of inter-human communications, the dimensional emancipation of existence."<sup>114</sup> He thus claimed that there is a possibility of art becoming relational when it takes "as its theoretical horizon the realm of human interactions and its social context, rather than the assertion of an independent and private symbolic space."<sup>115</sup> He defined art as a state of encounter. For him, art generates a form from random encounters that must be lasting in order to, like glue, hold together a particular composition of relations.<sup>116</sup>

However, art understood in terms of relational aesthetics, as outlined by Bourriaud, renders the work of art merely a medium that facilitates relations that can only occur between humans, i.e. artists and spectators: "The artist's practice, and his behaviour as producer, determines the relationship that will be struck up with his work. In other words, what he produces, first and foremost, is relations between people and the world, by way of aesthetic objects."<sup>117</sup> As such, the concept of relational aesthetics was criticized by the

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<sup>113</sup> Nicolas Bourriaud, *Relational Aesthetics*, trans. Simon Pleasance and Fronza Woods (Les Presse Du Reel, 2002), 9.

<sup>114</sup> *Ibid.*, 60.

<sup>115</sup> *Ibid.*, 14.

<sup>116</sup> *Ibid.*, 19–20.

<sup>117</sup> *Ibid.*, 42.

art historian Claire Bishop for its intentional notion of relation and interaction. Relational aesthetics renders art not only contextually dependent, but also intentionally reliant. In this way, it comes close to representation – relational aesthetics thus lacks the generative potential that it aspires to. Rather than transformation, it not only presupposes art's fixed aim and role, it also assumes unified subjects. Such a reading of relational aesthetics is possible, since, as Bishop argues, the idea of what is subject and how it acts is based on a shared notion of identity, ready to fulfil the artist's intention.<sup>118</sup>

Bishop proposes her own notion of relationality as practiced within art, which she formulates as participation. She writes about reflection embedded in the act of encounter. As she argues, when encountering the work of art, the process of thinking, activated by making things present and available to awareness, is more important than the actual act of fulfilling the intention of the artist. In that sense, the notion of agency is shifted to the spectator and the work itself.<sup>119</sup> By characterizing the art work as a project, the artist as collaborator, and the viewer as participant, Bishop maps art as autonomous. Autonomy of art should be understood here in terms of art's capacity to generate and construct, rather than represent, meaning, which, in turn, endows the work of art with political influence. The notion of autonomy is not based on its radical distance from the context, society, politics or ethics. It recalls the autonomy of Massumi's affect, which rather than reflect, shifts and transforms meanings.

The particular understanding of the fabulations of affect are clearly present, albeit slightly mutated, in this brief, art theoretical analysis of relationality. In their practice, the bioartists attentively exercise what Deleuze mapped as 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 practice rather *what* it *does*. Through the non-teleological methodology of experimentation, they focus our attention on the dynamic capacities of "living" matter. It is crucial that this materialist vital force of the body generates dynamic and risky encounters. The performance by *Art Orienté Objet* was a balance between a harmful and an enriching experience. It demanded a careful, long preparation and adjustments so that the artist's body could become accustomed to being affected in order that she be open for a radically different and transforming material intervention.<sup>120</sup>

In this way, bioart can be seen as belonging to the participatory art mapped by Bishop, since it shares some of its characteristics. For example, it shares the use of the rhetoric of presence and agency, and its use of living tissue materials, with participatory art.<sup>121</sup> Here, the

<sup>118</sup> Cf. full argumentation against the notion of Bourriaud's relational aesthetics by Claire Bishop, "Antagonism and Relational Aesthetics," *OCTOBER* Fall 2004, vol.110, 51–80.

<sup>119</sup> *Ibid.*, 79.

<sup>120</sup> Agnieszka Anna Wołodźko "Between Bio(s) and Art – Intensities of Matter in Bioart," in *Innen – Außen – Anders: Körper im Werk von Gilles Deleuze und Michel Foucault*, (eds) Ann-Cathrin Drews and Katharina D. Martin, Edition Moderne Postmoderne (Publisher, Transcript Verlag, 2017), 221–236

<sup>121</sup> See Joseph Dumit, "Foreword:Biological Feedback," in *Tactical Biopolitics: Art, Activism, and Technoscience* (eds) Beatriz da Costa and Kavita Philip (Cambridge, MA/London: The MIT Press, 2010) xii–xiv; Hans Gumbrecht, *Production of Presence: What Meaning Cannot Convey*, 1<sup>st</sup> edition (Stanford, CA: Stanford University Press, 2003).

artists are also collaborators with various scientific institutes and communities. Moreover, due to its vital character, the object of art becomes rather a long-term project. Finally, as in participatory art, the beholder is no longer just a viewer, but becomes a participant.<sup>122</sup> However, unlike the participatory art that makes human entities the main subjects, bioart focuses on the notion of the materiality of the body and life as the subject rather than the object of inquiry. Its autonomy is thus forged upon its focus on the ontological status of bodies outside the organic and species division, and within relational schemes.<sup>123</sup> The sense of participation presupposes an immanent nature of relationality as mapped by Spinoza-Deleuze. This means that relationality not only generates those bodies, but also that bodies themselves produce new relations, creative fabulations.

The relationality of affect transforms and demands a transformative sense of narrating such an encounter, one that operates within fictions or fabulations, rather than within the boundaries of aesthetics. Rancière defines aesthetics as the regime of the sensory, the distributions of sensations “that create specific forms of ‘commonsense.’”<sup>124</sup> Aesthetics as such functions according to the logic of the state of things; it is concerned with the properties of things, ascribed fixed interpretations and relations. If we are to think within affect as relations of transformation, we need a different approach to the sensory, one that is already practiced in the AOO performance, which captures and facilitates the movement of transformations while transforming.

In its search for the conditions of creation and relations of transformations, the AOO performance, rather than facilitating interactions between human and non-human, facilitates bodies in their relationality. This notion of relationality that is embedded in the discussed performance signals the dynamic and processual understanding of the body – the body that is generated within relations. Here, the notion of Spinoza-Deleuze’s affect becomes the creative fabulation of mutating bodies, impossible to capture and yet there, fabulating and inventing the continuous movement of contaminations.

Bioartists’ experimental approach reveals that “the exercise of thought comes primarily through its incorporation.”<sup>125</sup> In order to know the body, you must first experiment with what it can do, whether there are boundaries and how these boundaries, or lack of them, have any other implications. In this way, the notion of affect opens a route to direct contact of meaning with matter. As a sign that does not circulate within the representational system of signifiers, but rather emerges as an assemblage of bodies within encounter, affect “puts the sign back into contact with the material and vital plane of consistency that constitutes

<sup>122</sup> Claire Bishop, *Artificial Hells: Participatory Art and the Politics of Spectatorship*, (London/New York: Verso, 2012), 2.

<sup>123</sup> See a further elaboration of this argument in Agnieszka Anna Wołodźko, “Against Nature – Against the Body? Ecocritical Role of Bioart,” in *Creative Expression and the 21<sup>st</sup> Century Education*, (eds) Małgorzata Suświłło and Adam Grabowski (Olsztyn: UWM, 2015), 65-79.

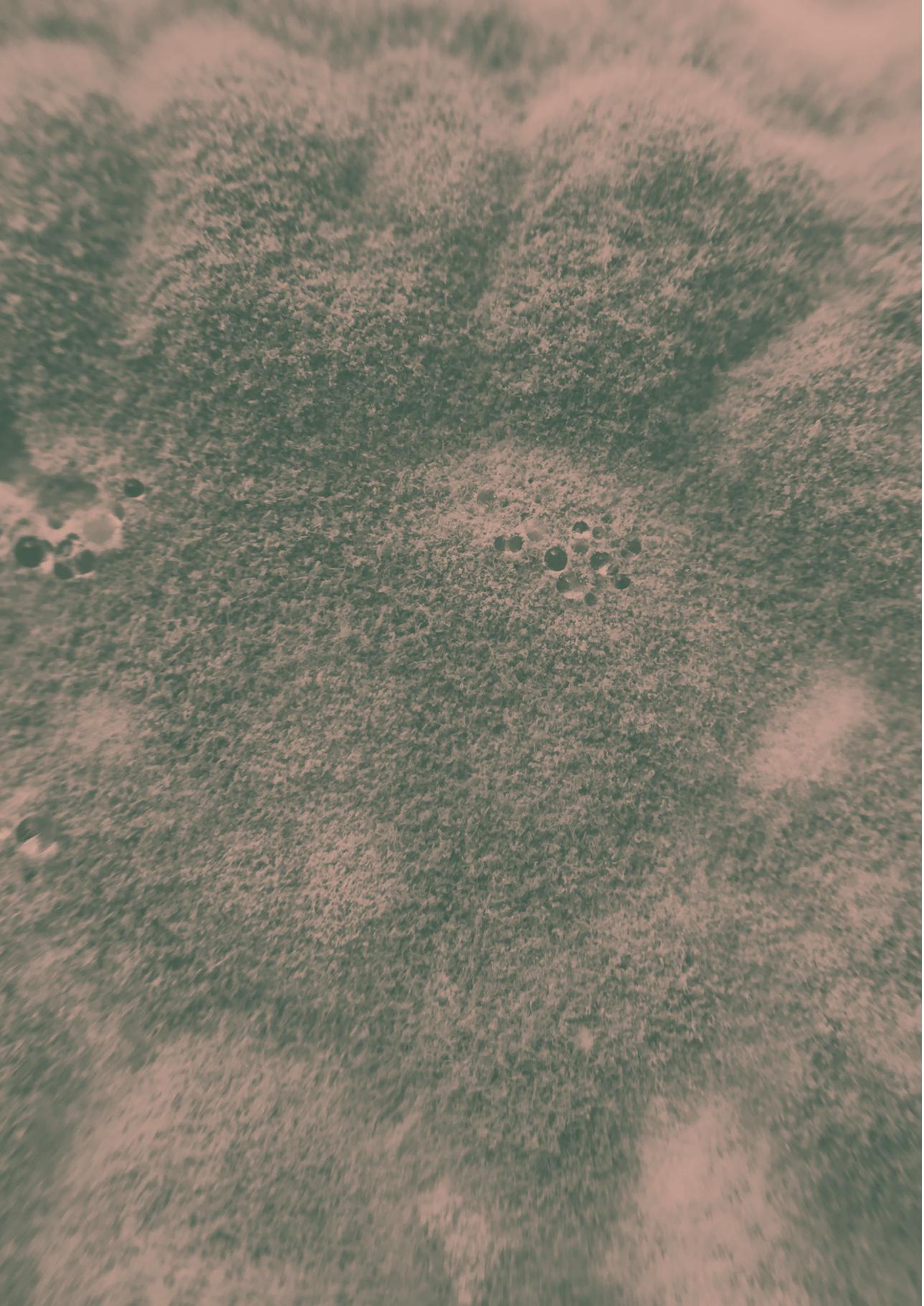
<sup>124</sup> Jacques Rancière, *Dissensus: On Politics and Aesthetics*, trans. Steven Corcoran, (London/New York: Bloomsbury Academic, 2010), 149.

<sup>125</sup> Marion Laval-Jeantet, “SELF-ANIMALITY,” text, <http://art-science.univ-paris1.fr/plastik>, <http://art-science.univ-paris1.fr/plastik/document.php?id=559>, accessed 3 June 2011.

it.”<sup>126</sup> In this way, affect redefines the encounter between bodies, revealing the dimensions of an event. By thinking in terms of affect, meaning appears not as given for interpretation, but rather as something created during the encounter. What is meaning and how affect, in its relationality and opposition to the signifying nature of affection, can be considered as a sign that is inseparable from matter, and primarily, how such material understanding of bodies can be practiced, is the subject of the next chapter.

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<sup>126</sup> Zepke, *Art as Abstract Machine*, 121.



## Chapter 3

# Tasting Meaning

A work of art is worth more than a philosophical work;  
for what is enveloped in the sign is more  
profound than all the implicit signification.<sup>1</sup>

“Do you know what is in your food?”  
*Genomic Gastronomy Investigation*

### 3.1 Contaminant *T* like a Taste of Smog

A dusty, slightly stifling flavour with a bit of sweetness – this is how the smog of Rotterdam tastes. The city in my mouth, swallowed and digested, became yet another element generating my body. The tiny bite of a cookie taken with hesitation and excitement, released the stream of chaotic questions and hesitation: is it safe for my easily upset stomach? Is it healthy to eat smog? What is actually inside the food I am now chewing? Can I really taste the city? Is it possible that we can understand something through taste?

The implications of taking affect seriously, that is, of acknowledging and acting upon the contaminating, transformative nature of relationality of our bodies, forces us to consider all the above questions in an equally serious manner. While chewing the bites of a city, a strange materiality reveals itself in the significance of the cookie named “Rotterdam” and the a-signification of its taste, in the encountered and experienced, but not yet named – will the cookie I am chewing contaminate and transform my body? What would such a transformation mean?

*Smog Tasting* is part of an investigation cycle by The Center for Genomic Gastronomy (CGG), established in 2011 and run by Zack Denfeld and Catherine Kramer. In the first part of the project titled *Smog Tasting 1.0* [Figure 13] the artists harvested air from polluted cities. It was done by making egg foam within open city spaces: “Egg foams are up to 90 percent air, and whipping the eggs causes particulate matter to be trapped in the batter,” they explain.<sup>2</sup> The project had a politico-ecological tint. The artists initially wanted to serve

<sup>1</sup> Gilles Deleuze, *Proust and Signs* (London: Continuum, 2008), 20–21.

<sup>2</sup> “Smog Tasting – The Center for Genomic Gastronomy,” <http://genomicgastronomy.com/work/2011-2/smog-tasting/>, accessed 25 November 2015.

the baked egg foams to politicians and business owners. At the same time, they denied any risks from its consumption, since “One should not worry too much about getting sick from these cookies: we breath this air every day!”<sup>3</sup>

The second part of the project, *Smog Tasting 2.0*, was a particular simulation of the polluted air. The smog data from cities all over the word were translated through an equation into an edible recipe [Figure 14]. Each pollutant corresponded with an amount of a specific spice. For instance, particulate matter (PM10), the name used to denote a collective of solid or liquid particles of dust, smoke, soot pollen and soil,<sup>4</sup> was replaced by black pepper. Nitrogen Dioxide (NO<sub>2</sub>), a reddish-brown gas emitted through the combustion of fossil fuels<sup>5</sup> was represented by an amount of wasabi powder. Finally, Sulphur Dioxide (SO<sub>2</sub>), a colourless gas emitted by the combustion of fossil fuels,<sup>6</sup> was translated as Indian black salt. The recipes were printed in the catalogue handed out at the performance event. Moreover, the participants could taste the cities, cooked according to the recipe, discovering for themselves how the smog might taste [Figure 15].

The third part, *Smog Tasting: Smog Synthesizer* [Figure 16] recreated *Smog Tasting 1.0*, which took place on the street under UV light. “Smog is formed by a mixture of different pollutants reacting together – a reaction that is usually catalysed by baking the chemical mixture in the sun.”<sup>7</sup> CGG thus wanted to recreate this process in a closed environment that would simulate a smell and flavour of air from any part of the world, once you know the data of its pollution.<sup>8</sup> The artists have designed a small smog chamber where it is possible to synthetize pollution of particular cities. You can make an egg foam inside the chamber while this polluted air circulates. As CGG explains: “By transforming the largely unconscious process of breathing to the conscious act of eating, the smog-tasting cart creates a visceral, thought-provoking interaction with the air all around us.”<sup>9</sup>

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<sup>3</sup> Ibid.

<sup>4</sup> “Particulate Matter — Environmental Terminology Discovery Service — EEA,” <http://glossary.eea.europa.eu/terminology/sitesearch?term=Particulate+Matter+&bgresponse=>, accessed 25 November 2015.

<sup>5</sup> “Nitrogen Oxides (NO<sub>x</sub>) Emissions —,” Indicator Specification, <http://www.eea.europa.eu/data-and-maps/indicators/eea-32-nitrogen-oxides-nox-emissions-1>, accessed 25 November 2015.

<sup>6</sup> “Sulphur Dioxide — Environmental Terminology Discovery Service — EEA,” <http://glossary.eea.europa.eu/terminology/sitesearch?term=Sulphur+dioxide>, accessed 25 November 2015.

<sup>7</sup> “Smog Tasting: Smog Synthesizer – The Center for Genomic Gastronomy,” <http://genomicgastronomy.com/work/2015-2/smog-synthesizer/>, accessed 25 November 2015.

<sup>8</sup> The project was a collaboration with Nicola Twilley, the author of the ‘Edible Geography’ blog, and received advice from Professor David Cocker and Mary Kacarab from UC Riverside. For further information see “Edible Geography | Thinking Through Food,” <http://www.ediblegeography.com/>, accessed 24 March 2016.

<sup>9</sup> “Smog Tasting: Smog Synthesizer – The Center for Genomic Gastronomy.”



Figure 13. The Center for Genomic Gastronomy, *Smog Tasting*, 2011, <http://genomicgastronomy.com/work/2011-2/smog-tasting/>, accessed 17 March 2017.

#### AIR QUALITY DATA TO SPICE MIX CONVERSION

$$\frac{\text{Smog data point}^*}{160} \times (\text{number of eggs}) = \text{number of tsp}$$

\*Smog data point (PM10, NO2 and SO2) given in one-millionth of a gram per cubic meter air ( $\mu\text{g}/\text{m}^3$ )

Figure 14. The Center For Genomic Gastronomy, *Smog Tasting 2.0 Meringue Recipe*, From Test\_Lab Genomic Gastronomy Program.Pdf, 2014, [http://v2.nl/files/2014/articles/Test\\_Lab%20Genomic%20Gastronomy%20Program.pdf/view?searchterm=genomic%20gastronomy](http://v2.nl/files/2014/articles/Test_Lab%20Genomic%20Gastronomy%20Program.pdf/view?searchterm=genomic%20gastronomy), accessed 17 March 2017.



**Figure 15.** The Center For Genomic Gastronomy, *Smog Tasting 2.0*, From Test\_Lab Genomic Gastronomy, [Http://V2.NI/Files/2014/Events/V2-Test-Lab-Genomic-Gastronomy-Documentation/Testlab\\_15.Jpg/View](http://V2.NI/Files/2014/Events/V2-Test-Lab-Genomic-Gastronomy-Documentation/Testlab_15.Jpg/View), accessed 17 March 2017.



**Figure 16.** The Center for Genomic Gastronomy, *The Smog Synthesizer*, 2015, Photo by Jordan Ralph Design, <http://genomicgastronomy.com/work/2015-2/smog-synthesizer/>, accessed 17 March 2017.

In this three-part project, CGG reveals multiple levels of how meaning functions and how it is generated within encounter. It can signify what is referring to the already given information and, at the same time, it can produce something new and unexpected. In their work, CGG confronts us with that which cannot be named, with the experience of an imperceptible body of air. The artists demonstrate the multiple complexities of production and the generation of meaning through taste. Their numerous performances and workshops are focused on the experience of tasting and eating food, which would otherwise remain unnoticed. The lack of transparency and controversies surrounding food production (the actual history and the source of food ingredients) is not necessarily a background to their work, but it is equally important in the close encounter with what you are about to eat. What can be closer and more intimate than the food in your mouth? Thus, CGG acts upon this unique, yet ordinary sense of intimacy that triggers the intensity and actuality of the whole process of eating. They ask: can this intimacy of taste – of a mixture of multiple bodies – produce something new, can it mean something?

### 3.2 Taste of Affect

For decades, the humanities have prioritized people's linguistic meaning formation – human reflections and textual analyses. While within art history and cultural studies there has been a wide understanding of meaning production, expanded from text to various “new media” – first photography, then film, now digital media – today, particularly in view of bioart's practice, we are faced with the generation of meaning by living media. Till now, humanistic study has considered questions such as what is life and what are living bodies to be purely matters of biological analysis, devoid of any significant socio-cultural meaning.<sup>10</sup>

However, if we take everything that makes sense and if we consider the making of what matters to be only a human cognitive endeavour, how are we to consider such phenomena as body modification and manipulation? If everything can be reduced to the human power of making sense, of producing what is significant, why do we need to construct moral codes, ethical rules and laws within biotechnological practice, for instance? Should all those issues and questions relating to the manipulation of bodies fit into the current normative and hierarchical system, according to a shared human cognitive capacity? However, rather than being easy to manipulate, bodies in biotechnology escape control – their agency leaks and affects what we consider to be the given and fixed rules.

Because bodies, from particles to large animals, are not passive, but active agents of change and transformation, human cognition is not the ultimate measure of things. When your own genes can be patented, when vibrant materialities of chemicals and particles can be mutated and used to mutate your own body, the question of meaning and how it is generated must be rethought. We need to ask ourselves: how can we talk about contemporary living bodies while maintaining old analytical tools of prioritization where meaning is solely a product of linguistic reflection? How can we seriously and consequently discuss a non-anthropocentric understanding of bodies given the implications of life commodification and manipulation if we maintain a vision wedded to the linguistic (semiological) construction of meaning?

Catherine Kramer argues that “it is about time that taste as another sense should have same prominence as an art form and the experience of taste how that affect you.”<sup>11</sup> The artist seems to argue for the validity of the sensuality of taste. She seems to urge for the opening up of anew field of understanding that, even though it is not based on linguistic systems, it can generate a meaningful experience. The way that the notion of taste is exercised within their cooking-eating performances reveals that, rather than focusing on taste as a valid judgement, we should consider taste as a reciprocal relationality. In their performances, one enters into contaminating relationality through taste and, consequently, it becomes evident how bodies affect and how one is affected by them. However, in order to grasp the

<sup>10</sup> See Rosi Braidotti, *The Posthuman*, 1<sup>st</sup> edition (Cambridge/Malden, MA: Polity, 2013), 67.

<sup>11</sup> CGG centre, *Trailer – Zack and Cat*, 2012, [https://www.youtube.com/watch?time\\_continue=1&v=7o6iQGHW-IE](https://www.youtube.com/watch?time_continue=1&v=7o6iQGHW-IE), accessed 17 March 2017.

implications of such a reading and practice of taste in terms of meaning that maintains the dynamic and contaminating characteristic of affect, it is important to distinguish taste from judgement.

CGG's seems to equate taste with Kant's disinterested ability to judge an object. Indeed, it might be a part of an aesthetic judgement, "one that is not influenced by charm or emotion";<sup>12</sup> yet, it "rests on subjective bases, and whose determining basis cannot be a concept."<sup>13</sup> For these reasons, namely the condition of disinterestedness and the lack of given conceptualization, some contemporary scholars see a link between Kant's description of taste and the definition of affect.<sup>14</sup> For instance, Steven Shaviro considers Kant's aesthetic judgement and the theory of beauty, in particular, to be a theory of affect and singularity. Taste, for Kant, is a relation between object and subject, of how an object is presented to the subject.<sup>15</sup> Shaviro argues that, for Kant, taste neither refers to a concept, nor does it rest in an object in the form of a given property; rather, it is a feeling of disinterestedness. Shaviro explains this disinterestedness in aesthetic judgement in terms of a possibility to experience that which is separated from me, what is not myself and what draws "me out of myself." He argues that, as such:

aesthetic judgment is detached from need. Kant notes that a starving person will eat just about anything; it is 'only when their need has been satisfied', only when they are well fed and assured of remaining so, that people have the leisure to develop and express their taste with regard to food. It's only when I don't need something that my liking for it, my being affected by it, can be 'disinterested and free'.<sup>16</sup>

Taste is a capacity to respond to how the object presents itself to the subject, irrespective of what this subject finds important.<sup>17</sup> The singular presentation of taste, in which Shaviro sees the characteristic of affect and which, I suggest, renders CGG work, is described by Kant, however, as the result purely of a harmony between the faculties of the subject, rather than harmony between different bodies. Thus, for Kant, harmony that results in taste is a cognitive process that initiates the ability to judge. Moreover, for Kant, the harmony of cognitive powers that conditions taste:

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<sup>12</sup> Immanuel Kant, *Critique of Judgment*, trans. Werner S. Pluhar, 1st edition (Indianapolis, IN: Hackett Publishing Company, 1987), 69.

<sup>13</sup> *Ibid.*, 74.

<sup>14</sup> See Ridvan Askin et al. (eds), *Speculations V: Aesthetics in the 21<sup>st</sup> Century*, (Punctum Books, 2014).

<sup>15</sup> Kant, *Critique of Judgment*, 75.

<sup>16</sup> Steven Shaviro, *Without Criteria: Kant, Whitehead, Deleuze, and Aesthetics* (Cambridge, MA: MIT Press, 2012), 5; Kant, *Critique of Judgment*, 52.

<sup>17</sup> Shaviro, *Without Criteria*, 2–3; Kant, *Critique of Judgment*, 63–64.

is unique in kind and provides absolutely no cognition (not even a confused one) of the object; only a logical judgment does that [...] it brings to our notice no characteristic of the object, but only the purposive form in the [way] the presentational powers are determined in their engagement with the object.<sup>18</sup>

From this follows that, although it has no cognitive capacity and it is beyond what subject may find important and desirable, for Kant, taste is dependent purely on the subject's ability to judge.

However, as discussed in the previous chapter, while affect as affectus does not originate in either of the bodies in the AAO performance, it is also not only a result of the harmonization of one's faculties. Affectus is the encounter that, if it results in harmony, then it is a harmony of not only cognitive capacities of a human, but of bodies' multiple and varied capacities. At the same time, affect holds the possibility of risk in terms of the encounter between those bodies. In other words, taste, if it is to generate an affective notion of meaning, cannot be considered according to Kant's notion of taste as an aesthetic judgement. Affect causes taste to originate within bodies that are already multiple, in their mutual relationality, and not within a singular body's faculties.

This brief diversion to examine Kant's philosophy of taste, although rudimentary, serves here to sufficiently demonstrate the contrast between the novelty of CGG's notion and use of taste and that of Kant's sense of aesthetic judgement. Although, at first sight, it might seem to share similarities with affect, particularly with its relational understanding,<sup>19</sup> considering the judgement of taste as affect adds more confusion to what the implications of affect might be and why practicing bodies within affect might be important.

By contrast, in their work, CGG exercise a sense of taste that is not only disinterested, but is also a risky encounter. It is a method for investigating contaminations. As such, taste not only allows for encounter with that which is outside myself, but it also allows for external change and transformations of myself. In the CGG performances, taste has a meaningful purpose to construct or change what is given. Such a notion of taste demands a different approach. It is not a harmonious encounter with one's faculties, where all the ingredients melt into a single, unified object, ready for us to consume – to judge. None of the ingredients of the cooked egg foam disappears in the harmonious taste. On the

<sup>18</sup> Kant, *Critique of Judgment*, 75.

<sup>19</sup> See Kojin Karatani's analysis of Kant's philosophy of a subject, where he proposes a different reading of the paradox of Kant's Copernican Turn. While Copernicus marked a shift from geocentrism as ego-centrism to heliocentrism, Kant's proposition to constitute objects by the form of projection by the subject has been stated rather as a shift towards anthropocentrism or subject-centrism. Regardless, however, of post-Kantian interpretations and claims that Kant is a precursor of the philosophy of subject, the author argues for a relational understanding, where Kant maps a subject's cognitive boundaries. The Copernican Turn, according to Karatani, means that in order to understand the subject, we must turn it into an object, things-in-itself, which marks a considerable shift in the way we may think about subjectivity. For further analysis of the argument see Kojin Karatani, *Transcritique: On Kant and Marx*, trans. Sabu Kohso, (Cambridge, MA: MIT Press, 2005).

contrary, taste becomes a way to encounter all the ingredients, seemingly hidden behind the representation of what we believe to be food. In their investigatory performances, the artists of CGG highlight the complex, ambiguous and often uneasy relationality of the food that we eat, or rather, that we become with. This is what Rick Dolphijn characterized as “the immanence of consumption,”<sup>20</sup> namely, the complex relationality and the coexistence of places and people, their food and the way of eating, “in how they come together.”<sup>21</sup> In other words, in CGG’s work, taste becomes an investigation of mutations, of risky and uneasy encounters of bodies within affect.

### 3.3 Contaminant C like Cobalt-60

The CGG’s project *Cobalt-60 Sauce* (2013) was an investigation into the radiating and mutating capacity of Cobalt 60 – a radioactive by-product of nuclear reactor operations<sup>22</sup> [Figure 17]. Cobalt 60 has been extensively used in medicine “as a radiation source to arrest the development of cancer,”<sup>23</sup> but also in the food industry, where radiation is used to cause plant mutation. The artists explain that the practice of selecting the desired mutation has proliferated since the end of World War II.<sup>24</sup> Yet, despite this use of mutated plants for over 60 years, the lack of any labelling on food products is common, resulting in a lack of awareness and, consequently, discussion on the nature, role and actual extension of food modification.

*Cobalt-60 Sauce* is “a barbeque sauce made from mutation-bred ingredients featuring radiation-bred ingredients such as: Rio Red Grapefruit, Milns Golden Promise Barely and Todd’s Mitcham Peppermint.”<sup>25</sup> It was served with Doritos at the MU gallery during the exhibition “Matter of Life Growing New Bio Art & Design”, in Eindhoven (28 November 2014 – 1 March 2015) [Figure 18]. When I tasted it, it reminded me of a curry tomato sauce, which only added to the sense of its commonality. I could have eaten it before without even knowing about its mutagenic nature. In this case, then, taste was not used as a moment of aesthetic judgement. Indeed, the sauce was presented as familiar, as something that has been used for decades, although now it stands next to detailed historical information about the origin of its ingredients. The bottle of the sauce, next to the tap that dispensed it, was

<sup>20</sup> Rick Dolphijn, *Foodscape: Towards a Deleuzian Ethics of Consumption* (Delft: Eburon Publishers, Delft, 2005), 7.

<sup>21</sup> *Ibid.*, 7.

<sup>22</sup> “CDC Radiation Emergencies | Radioisotope Brief: Cobalt 60 (Co60),” <http://www.bt.cdc.gov/radiation/isotopes/cobalt.asp>, accessed 16 December 2015.

<sup>23</sup> “Cobalt-60 | Chemical Isotope,” *Encyclopedia Britannica*, <http://www.britannica.com/science/cobalt-60>, accessed 16 December 2015.

<sup>24</sup> “Cobalt 60 Sauce – The Center for Genomic Gastronomy,” <http://genomicgastronomy.com/work/2013-2/cobalt-60-sauce/>, accessed 16 December 2015.

<sup>25</sup> Tom Howells, *Experimental Eating* (London: Black Dog Publishing, 2015), 13.

standing in front of a large poster visualizing a barbeque party in a suburban garden. The accompanying information about the origin and history did not constitute any ultimate experience, however.



Figure 17. The Center for Genomic Gastronomy, *Cobalt 60 Sauce*, 2013, <http://genomicgastronomy.com/work/2013-2/cobalt-60-sauce/>, accessed 17 March 2017.



Figure 18. *Cobalt 60 Sauce* The Center for Genomic Gastronomy at the MU exhibition “Matter of Life Growing new Bio Art & Design” (28 November 2014 – 1 March 2015). Photo by A. A. Wołodźko.

The audience was asked to taste the sauce that they were already familiar with, but now in a different way. Through the act of taste, they were invited to enter the sphere of investigation rather than consumption. Although not available at the expo in Eindhoven, in the hand out catalogue for V2(2014)<sup>26</sup> CGG published the recipe for the sauce, inviting everyone to view the investigation process: “HACKER is tasked with locating and collecting the hidden mutation bred ingredients that are silently sitting on supermarket shelves, and CHEF decides to combine them together into a barbecue sauce.” Instead of informing and representing their artistic research, they rather embodied a line of research that welcomed the audience into their investigation.

### *COBALT-60 SAUCE*

#### *BBQ SAUCE*

#### INGREDIENTS

*Makes about 32 cups*

40-60 whole dried milder, smoky chile  
 4 cups peppermint tea (made with 4-6 teabags)  
 1 cup Calrose rice  
 ¼ cup cumin  
 ¼ cup coriander  
 3 tbs cloves  
 2 cups raw pumpkin seeds  
 2 ruby red/rio star grapefruits, juiced  
 8 oranges, juiced  
 8 limes, juiced  
 3 bulbs garlic, chopped  
 10 red onions (1.6 kg)  
 2 bottles of ketchup (20 oz each)  
 3 cans of tomatoes (28 fl oz each)  
 1 bottle of soy sauce (20 oz)  
 1 bottle of canola oil  
 1 bottle apple cider vinegar (473 ml)  
 1 bottle red wine  
 1 bottle port  
 2 cups Macallan’s scotch whiskey  
 2 lbs sugar  
 salt

<sup>26</sup> V2\_ Institute for the Unstable Media at Rotterdam, “Test\_Lab: Genomic Gastronomy,” Event, *V2\_Institute for the Unstable Media*, [http://v2.nl/events/test\\_lab-genomic-gastronomy](http://v2.nl/events/test_lab-genomic-gastronomy), accessed 24 March 2016.

### PREP CHILE

Cut the stems off the chile and slice open to remove seeds and ribs. Set aside.

### PREP RICE POWDER

Heat heavy skillet.

Toast rice over medium high till brown and toasted.

Do not burn.

Let cool.

Put in spice grinder or food processor to make a powder.

### PREP SPICES

Toast the spices in a small skillet until fragrant.

Let cool.

Grind to fine powder in spice grinder or blender.

### RECIPE

1.

Quarter and slice onions. In a pot, add 3 tbs canola oil: heat over medium high.

Add onions.

Stir to coat with oil.

Sweat onions 10 mins till translucent;

reduce heat to med high and stir in 1 cup sugar.

Cook, stir occasionally, until onions have caramelized, about 10 minutes.

Do not burn.

When onions are caramelized,

stir in 3 cups wine, 1½ cups port, 2 cups whiskey, and salt.

Cook off the alcohol for about 10-20 minutes.

Set aside.

2.

Place pumpkin seeds on cookie sheets – distributed evenly.

Toast in low oven until browned.

Do not burn.

Set aside and let cool.

Grind in blender or food processor.

Do not over-grind into nut butter.

3.

Add all ingredients except citrus and apple cider vinegar to a large pot.  
Add a couple of handfuls of sugar.  
Simmer all ingredients in large pot until tomatoes are sweet (3-4 hours).

4.

Let cool (1-2 hours).  
Working in batches (as necessary),  
ladle sauce into a food processor/blender and make a smooth puree.  
Press each pureed batch through a sieve into a bowl or another large pot.  
When this process is complete, add all citrus juice.  
Taste.  
Add salt and apple cider vinegar to taste.<sup>27</sup>

CGG initiates spaces where it is possible to search for what is not yet present – for what is named, but not yet encountered. The artists created spaces of tension between what is given, shaping information into processual and material form, material relations. They do not hide ingredients by showing only the results. All of their cooking performances are done in front of and with the audience. Their focus on taste as the encounter with relations has further consequences for opening up thinking about taste as meaning generated in relationality. CGG's work creates spaces of learning but not informing. Taste becomes a sign, but a particular one – a sign that does not signify and yet creates meanings.

### 3.4 Sign Wars

In order to understand why taste is a relation that escapes signification and yet creates meaning, and therefore why it could be important for our study of bodies within affect, it is first necessary to briefly consider two major schools of semiotics that have, according to the contemporary semiotician John Deely, significantly influenced what we consider as meaning today: in the field of literature, Ferdinand de Saussure's notion of semiology; and in the field of philosophy, Charles Sanders Peirce's semiosis.<sup>28</sup> Although it is beyond the scope of this book to explore the vast development and complexity of the debate on the field of semiotics, I will briefly map the main characteristics of De Saussure's and Peirce's understanding. A brief analysis will outline the major distinctions of signs and their implications for a relational understanding of meaning.

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<sup>27</sup> CGG, "Test\_Lab Genomic Gastronomy Program.pdf," File, V2\_Institute for the Unstable Media, 9, [http://v2.nl/files/2014/articles/Test\\_Lab%20Genomic%20Gastronomy%20Program.pdf](http://v2.nl/files/2014/articles/Test_Lab%20Genomic%20Gastronomy%20Program.pdf), accessed 3 June 2017.

<sup>28</sup> John Deely, *Basics of Semiotics. Advances in Semiotics*, 1<sup>st</sup> edition (Bloomington, IN: Indiana University Press, 2004), 3–4.

As noted by Deely, De Saussure, the proclaimed founder of semiology, argued that there is a lack of certainty about the validity of science investigating “the nature of signs and the laws governing them.”<sup>29</sup> Nevertheless, De Saussure ascribed linguistics a special place in the field of human knowledge – its laws will be the laws of knowledge. According to Wendy Wheeler, this analogical approach to language and what we consider as knowledge means that De Saussure’s model of semiology has not only become the model for linguistic knowledge, but it has also shaped our understanding of the human. The claim of the science of signs, which is mainly focused on text, concerns the metaphysics of the construction of reality. However, if language alone can construct and carry meaning with regard to human intentionality, then this makes humans “most fully comprehended when they are thought of primary as isolated and monadic self-interested individuals.”<sup>30</sup> Moreover, language is considered to have provide schemes for how social and cultural structures are constructed in general.<sup>31</sup> The profound implication of such mechanisms becomes clearer when we look at the main characteristics of De Saussure’s semiology.

According to De Saussure, a sign has a psychological nature. It is immaterial in the sense that it “is not a link between a thing and a name, but a concept and a sound pattern.”<sup>32</sup> The concept is an abstract element that De Saussure calls signification. In addition, sound pattern, unlike sound, which has a physical dimension, is more connected to discourse than to the materiality of the vocal apparatus. As he explains: “Without moving either lips or tongue, we can talk to ourselves or recite silently a piece of verse.”<sup>33</sup> In this way, De Saussure mapped a two-sided understanding of a sign that is based on the relation of negation, always already referring to something that is not. This negative differentiation allows us to grasp the meaning of a sign: “The sound of a word is not in itself important, but the phonetic contrasts which allows us to distinguish that word from any other. That is what carriers the meaning.”<sup>34</sup> The difference between signs is actually based on an antagonism: signs “are not different from each other, but only distinct. They are simply in opposition to each other.”<sup>35</sup>

Consequently, following Wheeler’s argument, the antagonistic and dualist understanding of a sign presupposes humans to be the lonely constructor of meanings independently of bodies, materialities and sounds. In other words, that what we find meaningful is

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<sup>29</sup> “We shall call it semiology (from the Greek *se* ‘meion’, ‘sign’). It would investigate the nature of signs and the laws governing them. Since it does not yet exist, one cannot say for certain that it will exist. But it has a right to exist, a place ready for it in advance. Linguistics is only one branch of this general science. The laws which semiology will discover will be laws applicable in linguistics, and linguistics will thus be assigned to a clearly defined place in the field of human knowledge.” Ferdinand de Saussure, *Course in General Linguistics*, (New York: Bloomsbury Academic, 2013), 18.

<sup>30</sup> Wendy Wheeler, *The Whole Creature: Complexity, Biosemiotics and the Evolution of Culture* (London: Lawrence And Wishart Ltd, 2006), 18.

<sup>31</sup> *Ibid.*, 17–18.

<sup>32</sup> De Saussure, *Course in General Linguistics*, 76.

<sup>33</sup> *Ibid.*, 76.

<sup>34</sup> *Ibid.*, 138.

<sup>35</sup> *Ibid.*, 142.

autonomous from multiple materialities, bodies and their environment. All that makes sense is thus understood and communicated according to the simple rule of opposition: nature/culture, woman/man, human/animal, etc. Such statements on human's linguistic ability, isolation and autonomy when constructing meanings is, however, just a small part of what can be considered as a sign. As Deely argues, alongside semiology, Peirce constructed his notion of semiotique in which "semiosis [is] a broader and much more fundamental process."<sup>36</sup>

In contrast to De Saussure, the semiotics of Peirce constructs the pragmatic, or as I will call it, existential notion of meaning,<sup>37</sup> which allows us to study the action of signs. This existential notion of meaning demands "learning by experience" in contrast to "abstractive observation."<sup>38</sup> Such a pragmatic approach to meaning reveals that signs are not independent from materiality. Signs do not stand for something that is not, they are not a construction in the negative understanding of relation. Instead, Peirce argues: "a sign, or representament, is something which stands to somebody for something in some respect or capacity."<sup>39</sup> Sign addresses somebody – an interpretant – and it stands for something – its object – "in reference to a sort of idea, which I have [...] called the ground of the representament,"<sup>40</sup> which is detached and disinterested.

For Peirce, in order for the sign to be realised, there must be a spatio-temporal action. A sign must be "materially embodied" and only then can it pertain to the general understanding of an "active mode of being."<sup>41</sup> This is why Deely, following Peirce's notion of semiosis, characterizes semiotics in a broad sense, including "natural phenomena as well as purely cultural and literary texts."<sup>42</sup> As Deely further writes: "at the heart of semiotics is the realization that the whole of human experience, without exception, is an interpretive structure mediated and sustained by signs."<sup>43</sup>

Peirce's presupposition of a pragmatic understanding of signs allows us to understand meaning in a non-analytical and non-linguistic way. It opens up a more processual and existential approach to what we take as meaning. The existential nature of Peirce's semiotics, where the science of signs is purely a process of experience and learning, provides a particular sense of the materiality of meaning.

<sup>36</sup> Deely, *Basics of Semiotics. Advances in Semiotics*, 6.

<sup>37</sup> João Queiroz and Floyd Merrell, "Semiosis and Pragmatism: Toward a Dynamic Concept of Meaning," *Sign Systems Studies*, no. 1 (2006): 39.

<sup>38</sup> Charles Sanders Peirce, *Philosophical Writings of Peirce*, ed. Justus Buchler (Courier Corporation, 1940), 98.

<sup>39</sup> *Ibid.*, 99.

<sup>40</sup> *Ibid.*.

<sup>41</sup> Queiroz and Merrell, "Semiosis and Pragmatism," 41

<sup>42</sup> Deely, *Basics of Semiotics. Advances in Semiotics*, 2.

<sup>43</sup> *Ibid.*, 5.

### 3.5 The Point of View of Taste

Understanding signs through processes of experience and learning becomes a condition of practicing affect. Moreover, as a condition of practice, the existential notion of signs implies a particular method of practice. This method of practicing signs must have an equally dynamic, relational nature, and thus, it must betray the very characteristic of a method itself. The existential notion of signs demands a method without fixed rules or protocols, yet it does require some kind of recipe. For Deely, such a method without a method would mean taking a point of view rather than applying a given rule. According to Deely, modern philosophy has been obsessed with finding a method, with finding an ultimate and fixed protocol that would allow the truth to be established, and which would help formulate valid statements. This obsession with method, however, he argues, has led to particularization and a lack of adaptability of a theory for a variety of phenomena. Method as a systemic implementation has a narrow capacity. Because of its fixed nature, method allows us to grasp identities, define given states of things and find regularities; yet, anything that is dynamic and changing escapes its scope. For Deely, therefore, it is “semiotics [that] provides not a method first of all but a point of view.”<sup>44</sup> Taking a point of view as a starting point presupposes two major implications. Firstly, it acknowledges the already ideological position of the semiotician in some way, yet it does not make this ideology an intrinsic part of semiotics. Thus, a point of view is not universal, it does not pertain to the quality of objectivity. Secondly, point of view presupposes partiality. It does not refer to universality, but rather to a multiplicity of connections and possibilities. As with the practice of experimentation, to ensure the practice of signs, not only must the subject of the practice acknowledge her lack of total control and capacity to be affected by other subjects in the relations, but also the method must be partial – it must avoid the tendency of fixation and the universalization of encounters. In this respect, partiality means that which characterizes the partial observer, as discussed in the notion of experimentation in Chapter 2. Consequently, Deely indicates the existential nature of semiotics that acknowledges the processual and relational nature of how our existence and its understanding is constructed and how it is inseparable from our constant reflective relations on how these meanings are formed.<sup>45</sup>

One can now ask whether the way we practice meaning is an affirmation of the point of view. If partiality sets the course of how the search happens, then what is the point of view? How should we sustain a point of view that is not a fixed method? Some indications may be found in the practices of CGG. Indeed, the name of the artistic duo already provides a clue.

“Genomic” in The Center for Genomic Gastronomy refers to the scientific discipline of genomics, which, although is a part of genetics that is strictly occupied with the study of genes and their traces, refers to a more relational understanding of interaction between genes

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<sup>44</sup> *Ibid.*, 10.

<sup>45</sup> *Ibid.*, 12–13.

and environments. Genomics, then, is not focused on the particular sequences of genes, but on the mapping of gene expressions across different species and their environment. While looking at the emerging biotechnologies related to food, the artists take rather a relational approach.

The artists of CGG explain that, in their work, they are not necessarily interested in genes per se, but rather “how an organism relates to the larger world and how all the parts of the organism work together.”<sup>46</sup> In order to understand bodies in genomics they do not study fixed bodies, but the relations that generate those bodies. In this way, they take a perspective on relations that somehow determines what becomes important. Hence, for example, a relational approach results in their rather open and wide understanding of biotechnologies in food production and food sustainability. However, their relational approach remains partial. As they argue, a great deal of economic and media attention goes to “hi-tech solution, such as GM food and in vitro meat,”<sup>47</sup> an area in which there are already simple and sustainable solutions widely available. Take, for example, beans. Despite their seemingly old and “natural” place in our cuisine, beans, CGG argues, are the result of a long process of agriculture, breeding and selection. Beans are already manipulated bodies that carry a solution for food sustainability. In their work, CGG thus reimagines and de-familiarizes what we take for granted, by introducing a point of view into their method of relationality, with beans as a starting point for change.

CGG practices biotechnology as a point of view of the relationality of bodies; that is, of their constant change and mutability, which can generate new meanings and determine what is important. The artists are not interested in a universal answer to all the problems that biotechnology may cause. Instead, they are searching for practices that resist universalization. Here, partiality is understood as being outside the authority of institutions, yet within the relationality of already present habits and practices. Their practice of the point of view can also be seen in the “tools” they use in their investigations.

CGG are not focused on the particular methods of “doing science”, dressed in white coats and in the sterile environment of biotechnological labs. For some bioarts, this fascination with the methods of science and its attributes has been the main, if not the only, goal. Instead, CGG artists wear the chef’s whites of a fellow experimenter in a kitchen [Figure 19]. They approach the manipulation of living bodies as an act of brewing, seed saving, cheese making, mutagenesis and transgenesis, i.e. as ways of conducting the search, an apprenticeship in how bodies mutate.<sup>48</sup> Their mission is not only to imagine but to engage with the senses while thinking about our food habits through the wide practice of body manipulation.

<sup>46</sup> “Test\_Lab: Art Meat Flesh,” Event, *V2\_Institute for the Unstable Media*, [http://v2.nl/events/test\\_lab-art\\_meat\\_flesh](http://v2.nl/events/test_lab-art_meat_flesh), accessed 11 April 2016.

<sup>47</sup> The Center for Genomic Gastronomy, *Eat Less, Live More & Pray for Beans*, <http://genomicgastronomy.com/work/2012-2/beans-book/>, accessed 11 April 2016.

<sup>48</sup> “Test\_Lab: Art Meat Flesh.”

Taste's point of view, in CGG's practice, occurs as the capacity to relate, to be involved with all the possible relations that might become important. Taste becomes an encounter in-the-middle, where meanings and the understanding of "what is in your food" can be only grasped by engaging with the embodied relation. This engaged and attentive relation responds to the question: "do you really want to know how your sausage is made?"<sup>49</sup> Here, the act of eating becomes inseparable from the act of becoming with food. Their performance investigations are a transparent exploration of encounters with the flavours and smells of ingredients – nothing is hidden. They bring all the uncomfortable bodies to the table, exploring complex and dynamic connotations. "Ingredients rot and release aromatics when they are heated. They call attention to themselves through multiple human senses [...] The flavours and smells of food are a direct and immediate language for artists to communicate with."<sup>50</sup> In their work, the point of view of taste is an encounter with living bodies. As they stipulate, taste becomes the creation of an opportunity "to interact with data,"<sup>51</sup> and to become with that data.



Figure 19. Zack Denfeld (left) and Catherine Kramer (Right), <http://genomicgastronomy.com/about/>, accessed 17 March 2017.

In this way, I argue that, as a mutually tailored encounter, taste fosters not only a different understanding of meaning, but also meaning's different practice and generation. It creates meaning that is not only material, or only discursive, but that somehow combines ingredients and what happens in-between them. We are not only interested in how bodies produce relations, often simultaneously, but also how these relations can be prolonged.

<sup>49</sup> Howells, *Experimental Eating*, 12.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Ibid.*, 18.

Especially in art's practice and experience, meaning becomes something that is integral to, rather than exterior to life and living bodies. Through the work of CGG, we can not only grasp how meaning unfolds within the practice of art, in this case in the actual taste of smog, but mostly it reveals how meaning is something living; that is, we can understand what it means to taste while tasting.

### 3.6 A Life of Meaning

The semiosphere is a sphere just like the atmosphere, the hydrosphere, and the biosphere. It penetrates to every corner of these other spheres, incorporating all forms of communication: sounds, smells, movements, colors, shapes, electrical fields, thermal radiation, waves of all kinds, chemical signals, touching, and so on. In short, signs of life.<sup>52</sup>

The contaminants of the CGG investigations explore subtle calls, anxieties and intensities that are produced by living bodies and their multiple encounters and they cannot be quickly defined and categorized according to given norms, whatever they might be. In these artistic encounters, there are meanings generated that evade exclusively artistic and representational interest. But if we hold on to a stubborn belief in the notion of meaning as solely human, due to a logocentric capacity, then we perpetuate the same vicious cycle: of wanting change but not changing.

CGG invites us to encounter sensitivities that are different from what we – humans – know; encounters that escape our given understanding and foster questions, new approaches and thinking. CGG initiates its investigations based on this new sensitivity. Their experimental eating performances, an investigation into the relational happening of food, are made possible through the existential understanding of meaning, where meaning generation is a characteristic of all living systems, giving us clues and signs about how to practice contaminating matters of affect.

While considering meaning to be intrinsic to living bodies may seem unusual within the interests and focus of the humanities, it is not a novel concept. The initial ideas about constructing a discipline that would focus on relations between life and language already emerged with the discovery of the genetic code in the early 1960s.<sup>53</sup> Importantly, however, this practice of ascribing meaning and information to living systems was a long way from a dynamic and relational understanding. The belief among scientists that you can map genes and thus possess all the necessary information about a living body reached its apogee in the

<sup>52</sup> Jesper Hoffmeyer, *Signs of Meaning in the Universe* (Bloomington, IN: Indiana University Press, 1997), vii.

<sup>53</sup> See Marcello Barbieri, "What Is Biosemiotics?," *Biosemiotics* 1, no. 1 (13 February 2008): 1–3.

*Human Genome Project* (HGP) in the 1990s. Scientist working on the HGP presupposed an essentialist vision of what life and communication might be by propagating a belief in a hidden truth, that it is possible to encode the essence of humans and store it on a single storage device.<sup>54</sup> The consequences of such molecularization and digitalization of living bodies led to the easy commodification and manipulation of bodies that we see today. When living bodies are treated as bits of information that can be owned by companies, the questions of what a living body is and how we can practice its materiality become inseparable. The commodification of data about the body, consequently commodifies the body itself. Each medical and research practice, test, access to working with the body becomes an issue of law and rights, starkly illustrated by the cases of gene patents discussed in Chapter 1 of this book (*Contaminant P*).

However, parallel to an essentialist understanding of how meaning might be part of what we understand as life, a more relational approach has emerged within the biological study of animal communication. Rather than study the molecular level, biological scientists became focused on the vast relations between species and their environment, which presuppose the material notion of meaning that pervades the artistic practices of CGG. In order to understand the relevance that affect has for the materiality of meaning, I need to examine more closely the study of meaning within biology.

Thomas Sebeok has been the most influential scholar in shaping an interdisciplinary and relational understanding of what now is formulated under the name of *biosemiotics*. He outlined the main understanding of semiotics as

the sign process – the fundamental process that carries meaning and in which meaning is created. It is the process – not at all simple – that mediates purpose and causality, living and dead aspects of nature, and makes it possible to see how to overcome a crude dualism of mind and matter, as well as how the dynamics of the actions of signs provides a better approach to living systems than our dichotomies of mental versus physical properties.<sup>55</sup>

The idea that semiosis is an integral part of all living systems challenges not only the independent position of an interpreter of meaning generation, it also presupposes that the living body is already a dynamic interpreter of the many relations it is entangled with. In other words, such an understanding of semiosis breaks with the notion of the transcendental production of meaning. Meaning is not a result of post-reflection, which always presupposes a holistic view of the interpreted object; instead, within biosemiotics, meaning becomes an embedded and dynamic element of being, of life itself.

<sup>54</sup> Hilary Rose and Steven Rose, *Genes, Cells, and Brains: The Promethean Promises of the New Biology*, (London/New York: Verso, 2014), 25.

<sup>55</sup> Kalevi Kull, Claus Emmeche and Jesper Hoffmeyer, “Why Biosemiotics? An Introduction to Our View on the Biology of Life Itself,” in *Towards a Semiotic Biology: Life Is the Action of Signs*, (eds) Claus Emmeche and Kalevi Kull, 1<sup>st</sup> edition (London/Singapore/Hackensack, NJ: Imperial College Press, 2011), 2.

As many scholars noticed, and as Sebeok stipulates, the foundations of biosemiotics were laid by Jakob von Uexküll, “the brilliant neo-Kantian theoretical and experimental biologist.”<sup>56</sup> While the association of Uexküll with Kant might not be so useful in the light of our previous analysis of taste, a closer look at Uexküll’s theory of meaning will demonstrate how unique his thought was and how relevant it has become for our understanding of the materiality of meaning. After all, it is Uexküll’s notion of affect that was used by Deleuze and Guattari in *A Thousand Plateaus*.<sup>57</sup> Despite this influence, Uexküll’s theory of meaning, which is deeply material and relational in nature, is still undeveloped within humanistic study, remaining just another anecdote about the influence of biology on humanistic thought.

Uexküll builds his understanding of meaning by taking the consequential position of a biologist who, in order to understand a particular living body, instead of looking at that body’s properties, believes it is crucial to first search for the body’s relations within its environment. He is interested in how the organism behaves and relates with its environment. Mostly, he focuses on how particular relations within the environment of the living organism are constitutive of its existence. He looks at how a living being depends on particular conditions. He argues that only by mapping all these relations can we actually understand the body in question. In his description of a tick (the famous “tick story” borrowed later by Deleuze and Guattari<sup>58</sup>), he elaborates how this small, eyeless animal, which lives on tree branches, waiting to feed on a warm-blooded organism, depends on just three stimuli: “a general sensitivity to light in the skin,”<sup>59</sup> a sense of smell and a sense of temperature. All three stimuli, which Deleuze and Guattari call affects,<sup>60</sup> determine what it means to live as and be a tick. By mapping the relations that occur between the living creature and its environment, we can understand the life of a tick.

Importantly, the process of mapping relations starts from the presupposition that what we map is the subject with its environment. Uexküll calls this environment a bubble, an *Umwelt*, and in *A Theory of Meaning*, he explains that: “every animal, no matter how free in its movements, is bound to a certain dwelling-world, and it is one task of ecologist to research its limits.”<sup>61</sup> Brett Buchanan argues that Uexküll reveals his ethology as a “dimension of framing the being and becoming of the animal. The animal body is interrelated with its environment through the process of behaviours, so it becomes a question of how to engage

<sup>56</sup> Thomas Sebeok, *Signs: An Introduction to Semiotics*, 2<sup>nd</sup> edition (Toronto/Buffalo, NY: University of Toronto Press, Scholarly Publishing Division, 2001), 92.

<sup>57</sup> See Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (London [etc.]: Continuum, 2004).

<sup>58</sup> *Ibid.*, 283.

<sup>59</sup> Jakob von Uexküll, *A Foray into the Worlds of Animals and Humans: With a Theory of Meaning*, trans. Joseph D. O’Neil (Minneapolis, MN: University of Minnesota Press, 2010), 45.

<sup>60</sup> Deleuze and Guattari, *A Thousand Plateaus*, 283.

<sup>61</sup> Uexküll, *A Foray into the Worlds of Animals and Humans*, 139

the ontological dimension of this relation.”<sup>62</sup> Since organisms, rather than being seen as machines or objects, are subjects or agents that actively create what is significant within their environment, Buchanan argues that this assumes an “interpretative account on the part of the organism.”<sup>63</sup> What is created and what we eventually map in order to understand the organism, is the semiotic relations, meaningful relations that already are emerging between the organism and its environment. What we understand to be a tick is thus the significant relations between a particular body and its environment.

For Uexküll, meaning is not given and it is not a product of reflection, but rather meaning is a product of action: “every action impresses its meaning on a meaningless object and makes it thereby into subject-related carrier of meaning in each respective environment.”<sup>64</sup> In a sense, it is a phenomenological and correlationist understanding. Meaning seems to be dependent on the action of a subject that impresses itself on the object. Meaning, here, is thus something that does not emerge from matter, but is passed on to it. However, Uexküll seems to break with such intentionality of meaning through a particular understanding of a subject. For Uexküll, a subject is not a centred one, the subject does not construct meaning through her act of intention. It is an action that happens between encountering objects, which, in turn, become meaning generating subjects. In other words, meaning is not subject-centred or object-centred. The distinction between subject and object loses its relevance when faced with meaning that is action-centred; or, to put it differently, relation-centred.

Uexküll understands action as a relation that produces perception and which, in turn, gives the impression of an effect that generates meaning. He calls it “a functional cycle [...] which connects the carrier of meaning [action] with the subject.”<sup>65</sup> From this, it follows that it is not the subject that constitutes action and meaning, but the action; that is, a relation – what Peirce would call a sign and what I call affect – that constitutes subject and meaning. Action becomes “a vital functioning of animal subjects”;<sup>66</sup> it generates and conditions them while revealing their equally creative and meaning-forming capacities. In other words, action is a relation, an affect that has epistemological and ontological dimensions for how the meaning of bodies is generated.

Uexküll further argues that “meaning bridges the gap between physical and nonphysical process, just as it did between the sheet music and the melody.”<sup>67</sup> Importantly, his notion of action does not have the characteristic of an interaction, a kind of causal chain of action and response. For him, the linear notion of causality is merely a mechanical description,

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<sup>62</sup> Brett Buchanan, *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze* (Albany, NY: State University of New York Press, 2009), 4.

<sup>63</sup> *Ibid.*, 32.

<sup>64</sup> Uexküll, *A Foray into the Worlds of Animals and Humans*, 145.

<sup>65</sup> *Ibid.*

<sup>66</sup> *Ibid.*, 201.

<sup>67</sup> *Ibid.*, 157.

something that is more characteristic of a physiologist than a biologist. Why such an emphasis on the non-mechanical and non-linear understanding of action when thinking about the meaning? Although Uexküll did not draw this conclusion, I argue that the mechanical understanding of bodies that is intrinsic to lineal causality perpetuates dualism and renders it impossible to grasp the relational, material meaning.

As Jesper Hoffmeyer, a philosopher and biosemiotician, explains, the mechanistic vision of the body and a dualistic division between biology and psychology remains an ongoing practice in science today. In the face of the relational interdependence between one's thought and the reaction of a body's organs, contemporary medicine postulates explaining psychology according to biology, i.e. as a mechanical occurrence:

Because biology, like all other sciences, is based on Descartes' old dualism, which does not allow any inner link between the spiritual and the physical sides. So when medicine and biology decide to take psychological phenomena seriously, this can only be done by reducing said psychological phenomena to mechanical occurrences.<sup>68</sup>

Significantly, the mechanical interdependence explanation of the relation between one's thoughts and bodily reaction presupposes a dualistic view of the mind and body, i.e. that meaning is something added after the body has a reaction. As Hoffmeyer argues, within the body there are also semiotic processes. In other words, the materiality of the body already generates and produces the field of meaningful relationality: "inside the body, too, processes are in fact occurring which can best be understood semiotically, processes which make it possible to understand how the body can become "minded" and how the mind can become physical."<sup>69</sup> The acknowledgment of the non-linguistic generation of meaning implies a realization that meaning happens not only in a body as a result of an action by another body, but in encounters between and within bodies as an integral and constitutive element of living systems. It thus only makes sense to consider taste as an encounter in relationality when affirming that meaning is generated by the encountering bodies and their capacities as signs. In the case of the works by CGG, for the taste to be an encounter in relations, the body's materiality must already have a semiotic character – it must already produce and be produced by signs.

This material and relational character of meaning belongs not only to what, as a result of a dualistic division, is taken as conscious minds, but also to what is understood as passive matter. A material, relational notion of meaning allows us to think about the materiality of the body not as a passive mechanistic chunk, but as generative agency, rendering the body/mind dualism not only politically, socially and culturally obsolete, but simply logically contradictory. To understand such a notion of materiality, it is not enough to count bodies'

<sup>68</sup> Hoffmeyer, *Signs of Meaning in the Universe*, 69.

<sup>69</sup> *Ibid.*, 69.

internal and external relations. Similarly, to understand bodies' function, it is not enough to track linear causal relations and interdependences between those bodies. We need to have some insights into "the practical principle" or "inner logic" of how it works; that is, how these bodies are shaped at the semiotic level.<sup>70</sup> As in Uexküll's description of a tick, we need to know what stimuli are actually important for a tick's life. Uexküll described this importance of stimuli as the "vital functioning" of a living being.<sup>71</sup> This vital functioning is what later behaviourists called significance and what I argue becomes a particular understanding of materiality of meaning as a condition of practicing bodies within affect.

### 3.7 Relations of Significance

When Uexküll mapped three stimuli that drive a tick's life, he is not querying the tick's causal relations, which depend on a purely mechanistic view of action and response (a particular actor-network scheme). He does not determine his understanding of the tick based on the relations of causes, as if he had clear and given knowledge about why a tick waits, smells and drinks – why it simply does what it does. Instead, Uexküll focuses on the relations of significance, on how important particular stimuli are for the living body. In his study of a tick, Uexküll asks what is important for the creature to be able to function and regenerate. This existential notion of meaning is quite different from mechanistic and semiological understanding. Such an existential approach demands a direct connection of meaning with value and life and with what is important for a body to continue to live. Here, rather than working on the level of logical denotation and correlation, meaning works on the level of what becomes important for a body to live. In this way, the material notion of meaning that affect implies demands another condition for its practice, namely the search for significance and not signification.

Interestingly, such an existential approach to meaning is nothing new or limited to biological endeavour. Charles Morris, a semiotician, noticed that the two levels of functioning of the word meaning, logical and existential – the level of signification and the level of what is significant – are present in many languages: "Thus if we ask, what is the meaning of life, we may be asking a question about the signification of the term 'life', or asking a question about the value or significance of living – or both."<sup>72</sup> Morris calls the existential notion of meaning expressive. This expressiveness involves the signification of an object not only referring to the object's properties, but, equally, it is inseparable from the interpreter's

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<sup>70</sup> *Ibid.*, 80.

<sup>71</sup> Uexküll, *A Foray into the Worlds of Animals and Humans*, 201.

<sup>72</sup> Charles Morris, *Signification and Significance: A Study of the Relations of Signs and Values*, 3rd edition (Cambridge, MA: MIT Press, 1968), vii. Recently, the same differentiation of the word meaning was mentioned by Manuel DeLanda in his lecture on "Material Affectivity" given at PennDesign (The University of Pennsylvania School of Design). See the video recording: "Manuel DeLanda, *Material Affectivity* at PennDesign, September 17, 2014 on Vimeo," <https://vimeo.com/107274730>, accessed 7 April 2016.

dispositions. Meaning concerns values; however, these values are understood in a relational and dynamic, rather than a universal and fixed, way. As he stipulates, “value situation [...] is inherently relational, involving an action of (positive or negative) preferential behaviour by some agent to something or other.”<sup>73</sup> Moreover, he argues for the values to be objectively relative. This means that the value of something, i.e. what one believes is important, does not belong solely to the property of an object or to its interpreter’s preferences. Rather, what becomes significant is a contingent composition of relations between an object and its interpreter that does not exhaust the number of possible relations. In other words, you can find a meaning of life once you set a particular goal, but it does not mean that you cannot find a new meaning of life, once the goal is fulfilled or changed.

Meaning as significance, as value or that which is important, is not an abstract idea. It is not something fixed or given, but rather it is a relation that happens within a particular situation. Although sign carries many characteristics of living beings, Morris nevertheless argues that it cannot be equivalent with it. Sign is an action, but always directed at a particular goal.<sup>74</sup> Since Morris believes that life extends sign’s capacity, within contemporary biosemiotics this means that sign and life are considered equal, and thus the notion of meaning acquires profound consequences.

Hoffmeyer explains this material understanding of meaning using an analogy between a city and a living cell. Imagine that cars driving in a city are DNA in a cell. A full mechanical description of a car does not provide an explanation and understanding of the car’s movements through the city or the logic behind it. Equally, detailed knowledge about the structure of DNA is not very useful. You need to have an understanding of all of the traffic, how people use it and how the city works in order to be able to come close to understanding what drives particular movements, what is important for each element of traffic and its flows and relationality,<sup>75</sup> or what each sequence of DNA does and how it is important for other parts of the whole chain and for their expressions.

We can view the food encounters that CGG practice in a similar vein. It is not enough to know what the ingredients of a particular dish are, or what their history, biological structure or social use is. It is also not enough to simply cook those ingredients and eat them in order to understand them. You need to create a space of encounter to enter their internal logic, to enter their relationality in order to generate the meaning of food. In the process of encounter, all the relations that the bodies are entangled with start to work, exercising what for the bodies becomes significant. This means that the system of significance actually emerges during the process of decision-making and interpretation. The interpretation here, however, has the character of a search that works as an encounter and is not a post-action presupposing the transcendental interpreter and a holistic vision of an object. Interpretation

<sup>73</sup> Morris, *Signification and Significance*, 9.

<sup>74</sup> See Susan Petrilli, “Charles Morris’s Biosemiotics,” *Semiotica* 127 (1999): 67,72.

<sup>75</sup> Hoffmeyer, *Signs of Meaning in the Universe*, 85.

happens while eating, who or what interprets in the moment of encounter is blurred here. As Deleuze explains,

Interpreting has no other unity than a transversal one; interpreting alone is the divinity of which each thing is a fragment, but its 'divine form' neither collects nor unites the fragments, it carries them on the contrary to the highest, most acute state, preventing them from forming a whole.<sup>76</sup>

A consequence of the relational character of a sign is that once the search of meaning is fulfilled, and the sign producing meaning disappears as a sign, it can again become meaningless, depending on a new relation. As such, sign has no fixed state or goal, its existential nature renders it dynamic and constantly desiring new relations. This chaos of relations is organized by the relations of importance and signification. Thus, it is not the eater or food alone that does the thinking, but the processual, temporal and spatial relationality between and within bodies.

Moreover, thinking in terms of the relations of significance that construct our bodies within affect, in addition to biological and behavioural theories, is particularly vivid in art philosophical analysis. John Dewey's study of aesthetic experience in *Art as Experience*, for example, allows us to grasp what actually happens between bodies in an encounter. Dewey's understanding of experience has served a rather humanistic revitalization of the human body as a valid tool for the phenomenological grasp on knowledge.<sup>77</sup>

However, his relational understanding of experience has rather more crucial implications for our study of material notion of meaning as significance. Dewey's notion of experience, when viewed through affect, gains new importance – Dewey has shaped how can we understand not only why art is important, but primarily how art generates importance.<sup>78</sup>

<sup>76</sup> Hoffmeyer, *Signs of Meaning in the Universe*, 85.

<sup>77</sup> Richard Shusterman actualizes Dewey's notion of experience in his Somaesthetics (see, for instance, Richard Shusterman, *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics*, 1<sup>st</sup> edition (Cambridge/ New York: Cambridge University Press, 2008)), yet his understanding of experience diverges greatly from Dewey. Shusterman focuses mainly on human bodily perception and its revitalization for a better human cognition and life. His understanding of the body, despite a philosophical tradition of the body's inferiority and passivity, is focused on the human body's individual capacity and mastery that perpetuates the dualism that Shusterman claims to overcome: "If we wish to improve our lives (and not only by improving the arts and aesthetic experience that enrich our lives), then one important way to do so would be to improve our understanding and mastery of our bodies – the fundamental, indispensable instrument or medium through which we perceive, act, and live this life on earth." in Richard Shusterman, *Thinking Through the Body: Essays in Somaesthetics* (Cambridge: Cambridge University Press, 2012), x.

<sup>78</sup> Although Dewey's use of the word of affect (which he introduces elsewhere, see John Dewey, "Affective Thought," in *The Later Works, 1925-1953*. Vol. 2: 1925-1927 (Carbondale, CO [etc.]: Southern Illinois University Press, 1984), 104-110), has a rather psychological tradition that is far from the Spinozian understanding of affect as affectus, he wrote about experience in line with what can be read as happening of relations of significance. In his work, he takes a "back door" approach that reveals how the encounter of bodies, regardless of their aesthetic or non-aesthetic character, brings about a complex and dynamic sense of relations. As he explains: "In order to understand the meaning of artistic products, we have to forget them for a time, to turn aside from them and have recourse to the ordinary forces and conditions of experience that we do not usually regard as esthetic," in John Dewey, *Art as Experience* (New York: TarcherPerigee, 2005), 2.

For Dewey, relations within experience are risky as they produce tension and resistance between bodies in an encounter. Like Spinoza, he argues that relations happen in a rhythmic movement, which, in order for it to lead to change and alteration, cannot be an uninterrupted interaction. The clash of bodies in an encounter does not happen in a dialectical manner, where the production of the new happens at the expense of one's destruction. In a Spinozian spirit, Dewey writes about the intensity that is discharged at a moment of encounter. This intensity is "the power to move and stir, to calm and tranquillize."<sup>79</sup> This can be compared to what the philosopher and literary scholar Hans Ulrich Gumbrecht described as "moments of intensity." In terms of experience, meaning materializes before any cognition takes place. This event of encounter has a dynamic pre-reflexive character, which Gumbrecht separates from any form of preconscious needs and desires.<sup>80</sup> Thus, the existential character of meaning generating in such an understanding of encounter should not be regarded as a psychological category, but rather should be viewed in terms of the ontological drives of bodies, of how something becomes important for bodies' existence.

According to Dewey, meaning unfolds and emerges within experience. I would frame it that meaning occurs within the happening of affect. For Dewey, the experience is an encounter that is an "interpenetration" of bodies, of self and the environments, of objects and events.<sup>81</sup> Such a notion of a dynamic and relational sense of experience is possible for Dewey, since every experience happens through impulsions. Impulsions are drives and forces, reminiscent of what Spinoza described as *conatus*. They are not simple, automatic body impulses, but rather existential desires that move bodies towards others. Their purpose is to sustain the body, to fulfil its needs. Unlike the mechanic movement of a tongue and swallowing when eating, for instance, impulsion is the craving for food, it is "a movement outward and forward of the whole organism to which special impulses are auxiliary."<sup>82</sup> Most importantly, since it is a movement that is by no means automatic, it expresses the significance of the dependency with the environment: "The need that is manifest in the urgent impulsions that demand completion through what the environment – and it alone – can supply, is a dynamic acknowledgment of this dependence of the self for wholeness upon its surroundings."<sup>83</sup> In this way, for Dewey, impulsions not only initiate an experience, they also make it "[...] clothed with meaning."<sup>84</sup>

Dewey's notion of meaning, similarly as in biosemiotics, is that of significance. Meaning is what is important, what drives the body and makes it co-related with the environment.

<sup>79</sup> John Dewey, *Art as Experience*, 191.

<sup>80</sup> Hans Gumbrecht, *Production of Presence: What Meaning Cannot Convey*, 1<sup>st</sup> edition (Stanford, CA: Stanford University Press, 2003), 99–100; Agnieszka Anna Wołodźko, "Materiality of Affect: How Art Can Reveal the More Subtle Realities of an Encounter," in *This Deleuzian Century: Art, Activism, Life*, (eds) Rick Dolphijn and Rosi Braidotti (Leiden/Boston, MA: Brill, 2015), 175–176.

<sup>81</sup> Dewey, *Art as Experience*, 18.

<sup>82</sup> *Ibid.*, 60.

<sup>83</sup> *Ibid.*, 61.

<sup>84</sup> *Ibid.*, 62.

The question of significance or importance thus opens up the possibility of thinking in a relational way. It introduces the way that affect foregrounds the relational or expressive nature of an object. The urgent question now is: how are we to transform the level of signification, which even this book relies upon, into affective, relational knowledge of significance? In other words, how can we avoid the hypocrisy of criticizing the dominion of the systems of signification through the signification of these very words?

Considering again *The Smog Tasting*, highlights a particular dilemma. The assumptions and design of the smog performance investigation seem to presuppose given database containing pollution statistics. After all, they first had to collect data that signified pollution in order to translate them into a specific dish. How can such a reliance on signification be considered as practicing material semiotics? How can such a transfer of data create new material experiences?

When we enter the online database of the European Environment Agency,<sup>85</sup> where we can read about smog data, we will find exact numbers, measures, statistics, graphs and definitions of individual chemicals, according to the area. We are able to study statistics regarding casualties of pollution, usual side effects of particular substances and their impact with regard to the exact degree of exposure. Finally, we will read about the newest regulations, policy measures and interventions. What we will not find there, however, is how to live with the smog, what our daily encounters with the smog are, or how are bodies co-relate with their environment in order to live within the smog.

I argue that the two meanings that Morris distinguished, namely signification and significance, although different, do not oppose each other, they do not perpetuate the dialectic logic of De Saussure's semiology. Instead, they complement each other. In this way, signification and significance seem to be at work in CGG's performances. The relation of signification and significance reveal the dynamic dimension of meaning. Rather than focusing on what is there, solely on what is already given, CGG's investigations teach us how to inquire about what might be significant once we multiply, shift or change the scale of relations with contaminants.

Stacy Alaimo, a literature and environmental scholar, would describe CGG's approach in terms of "material significations"; that is, a metonymic slide where body and environment construct a "trans-corporeal space." As she explains: "Such a body (or mind) cannot be distinguished from that which surrounds it, since various substances may provoke pain, illness, disability, confusion, and fatigue."<sup>86</sup> In trans-corporeal spaces, a body and environment are already interchangeable, are already continuous in their permeability – they are within affect. "Bodies are not self-contained,"<sup>87</sup> she argues. In order to grasp their

<sup>85</sup> "European Environment Agency's Home Page — European Environment Agency," Folder, 2017, <https://www.eea.europa.eu>, accessed 3 June 2017.

<sup>86</sup> Stacy Alaimo, *Bodily Natures: Science, Environment, and the Material Self* (Bloomington, IN: Indiana University Press, 2010), 115.

<sup>87</sup> *Ibid.*, 135.

meaning, to understand them, in addition to asking questions about data – who, how many and what – we must recognize the importance and necessity of the question “how does this person manage to live?”<sup>88</sup>

In this way, CGG not only invites speculation on how life might be once the smog becomes part of us, within us, as intimately as food in our mouths, but it also generates the importance of that investigation. Thinking and practicing significance becomes a condition and implication of affect – of the relation of transformation that we live in. Moreover, as CGG argues: “As artists, we don’t claim to discover Truth. We see value in speculating widely, creating novel experiences and teasing out assumptions we have about the world.”<sup>89</sup> Using this speculative approach, transforming what is given by multiplying relations of what is possible, they signal what is at stake when we practice the relations of significance, namely, the search for truth.

### 3.8 The Truth of Significance

Meaning is wider in scope as well as more precious in value than is truth, and philosophy is occupied with meaning rather than with truth.<sup>90</sup>

The urge for meaning rather than truth seems to be a necessary consequence of affect that constructs living bodies. If not obvious for philosophical endeavours, the search for meaning, for that what becomes significant, is much more vivid in artistic ones. In art’s practice, the encounters between bodies are continuously re-created, exercising the necessities that drive encounters. Through art, we can grasp the existential dimension of meaning, yet this meaning holds much darker implications than we are used to when thinking about the truth. When bodies’ meanings are driven by dynamic and changing relations of importance, how can we understand them? If there are no given rules for practicing the materiality of meaning, how can we share and further practice that knowledge in respect of bodies? Does knowledge accumulation within affect make sense, or are we prone to a never-ending investigation of what bodies can do and mean?

In the quotation that opens this section, Dewey is not suggesting that the truth is irrelevant, rather, he indicates that only the judgements regarding what is true or false are not significant. These judgments may be of great importance, yet they occupy a tiny fraction of the scope of what we understand as meaning. “Meanings are generated and in

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<sup>88</sup> Ibid., 120.

<sup>89</sup> The Center for Genomic Gastronomy, “Eat Less, Live More & Pray for Beans.”

<sup>90</sup> The Center for Genomic Gastronomy, “Eat Less, Live More & Pray for Beans.”

some degree sustained by existence. Hence they cannot be wholly irrelevant to the world of existence.”<sup>91</sup>

The quotation from Deleuze’s “Proust and Signs” that initiates this chapter seems to directly follow Dewey’s thought: “A work of art is worth more than a philosophical work; for what is enveloped in the sign is more profound than all the implicit signification.”<sup>92</sup> Deleuze signals not only the profound inspiration he finds in art, which allows him to engage in his pursuit to overcome the priority of signification. He also indicates that the notion of significance is simply more important than the search for truth. By writing that “art is worth more,” he suggests a different line of thinking that prioritizes values and importance before any aspiration for truth.

Deleuze approaches signs as things that do not signify, that do not refer to something else, but as things that materialize when generating what matters. He analyses such a notion of signs with regard to learning process: “Learning is essentially concerned with signs. Signs are the object of temporal apprenticeship, not of an abstract knowledge.”<sup>93</sup> Deleuze thus understands signs in terms of processual and careful learning about all the relations involved. It is a process of apprenticeship, in which there is no given point or method of observation. One must first build up the sensitivity, appreciation and attachment for the sign to be able to decipher and interpret it. As Deleuze explains, “one becomes a carpenter only by becoming sensitive to the signs of wood, a physician by becoming sensitive to the signs of disease [...] Everything that teaches us something emits signs; every act of learning is an interpretation of signs or hieroglyphs.”<sup>94</sup>

In his book on Proust, written before his study on Spinoza, Deleuze outlines an understanding of signs as being existential. Later, in his “Spinoza and the Three ‘Ethics’” text, he will explicitly equalize sign and affect, characterizing them as vectorial, i.e. they “are passages, becomings, rises and falls, continuous variations of power.”<sup>95</sup> However, there are already many indicators in Deleuze’s earlier writings that he sees signs as affect. By understanding signs in this way, Deleuze strengthens the radical shift in thinking, namely, that meaning and what we take as knowledge within humanities has not only a linguistic structure, but also a material one. Deleuze transforms the notion of signs, extracting them from analytical philosophy and endowing them with an existential function.<sup>96</sup> However,

<sup>91</sup> Ibid., 82.

<sup>92</sup> Deleuze, *Proust and Signs*, 20–21.

<sup>93</sup> Ibid., 4.

<sup>94</sup> Ibid.

<sup>95</sup> Deleuze, *Essays Critical and Clinical*, trans. Daniel W. Smith and Michael A. Greco, (Minneapolis, MN: University of Minnesota Press, 1997), 139.

<sup>96</sup> As noticed by Christopher M. Drohan, this existential understanding of signs shares some similarities with Heidegger’s understanding of epistemology through ontology; see Christopher M. Drohan, *Deleuze and the Sign*, (New York: Atropos Press, 2009), 9–10. For Heidegger, to know “what is” can be fulfilled only by relating to it, by becoming with it: “We shall never learn what “is called” swimming, for example, or what it “calls for” by reading a treatise on swimming. Only the leap into the river tells us what is called swimming,” in Martin Heidegger, *What Is Called Thinking?* (New York: Harper & Row, 1968), 21. Inna Semetsky also shows this imperative of experience

what is important for our discussion on materiality of meaning is the question of how to practice such material, existential knowledge. What does materiality mean here, next to relationality? What does this material notion of meaning actually entail once we establish how to practice it?

Deleuze already gives us some clues in his way of thinking about signs, which is rooted in Peirce's theory of signs analysed briefly earlier in this chapter. Firstly, Deleuze borrows Peirce's understanding of signs as a search that insists on an engaged relation where "One does not think and one does not act, but one makes signs."<sup>97</sup> Secondly, the engagement of making signs is expressed by a demand for a trained sensitivity, as we have already discussed: "One becomes a carpenter only by becoming sensitive to the signs of wood, a physician by becoming sensitive to the signs of disease. Vocation is always predestination with regard to signs."<sup>98</sup> Deleuze then argues that signs generate the search for knowledge in this engaged relation. Since, for Peirce, "a sign is something by knowing which we know something more,"<sup>99</sup> Deleuze argues that the search "is in fact a search for truth."<sup>100</sup>

Deleuze's understanding of truth is not then based, as we may already predict, on the classical definition of correspondence of reality with judgements about this reality. Such a notion of truth would only be a product of logic and the result of arbitrariness. As such, the truth presupposes no risk and no novelty in the encounter, demanding a given number of already known results: "They [the philosophers of analytical truth] remain gratuitous because they are born of the intelligence that accords them only a possibility and not of violence or of an encounter that would guarantee their authenticity."<sup>101</sup> Similarly, like Deely, Deleuze sees a presupposition of and pursuit of a method in such a philosophical approach to truth. The image of thought, characteristic of philosophy, that is concentrated on the corresponding notion of truth presupposes the intrinsic love for truth. In your first year studying philosophy, you will learn: that the love for truth is the most "natural" and specific point of departure for all thought – philosophy, from the Greek φιλοσοφία: *phileo* denotes *to love*, *sophia* denotes *wisdom*.<sup>102</sup> The love for truth, for wisdom, constitutes a friendship inscribed in philosophy – and it is exactly this idea of philosopher as friend that Deleuze distrusts.

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as "becoming with" into knowledge formation in Deleuze's thought through Dewey's influence. She positions Deleuze and Dewey on the same line of thinking about experience, where what we take as knowledge is actualized and generated by the experimental and experiential processes of learning; see Inna Semetsky, "Deleuze's New Image of Thought, or Dewey Revisited," *Educational Philosophy and Theory*, 35, no. 1 (2012): 17–29.

<sup>97</sup> Deleuze, *Proust and Signs*, 5.

<sup>98</sup> *Ibid.*, 4.

<sup>99</sup> Peirce, *The Collected Papers*, CP 8.332.

<sup>100</sup> Deleuze, *Proust and Signs*, 11.

<sup>101</sup> *Ibid.*

<sup>102</sup> "Philosophy, N.," *OED Online* (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/142505>, accessed 3 June 2017.

The notion of a friend in the mindset of philosophers relies on the universalization of communication, on reaching an agreement and confirming one's position:

Friends are, in relation to one another, like minds of goodwill who are in agreement as to the signification of things and words; they communicate under the effect of a mutual goodwill. Philosophy is like the expression of a Universal Mind that is in agreement with itself in order to determine explicit and communicable significations.<sup>103</sup>

However, exposing philosophy in this way does not lead Deleuze to an abandonment of truth. Rather, with Guattari, he sets a different course, a “different than a friend” persona for philosophy. He argues that it is not what is true, but what is important that continuously inspires new, genuine thought:

Philosophy does not consist in knowing and is not inspired by truth. Rather, it is categories like Interesting, Remarkable, or Important that determine success or failure. Now, this cannot be known before being constructed. We will not say of many books of philosophy that they are false, for that is to say nothing, but rather that they lack importance or interest, precisely because they do not create any concept or contribute an image of thought or beget a persona worth the effort.<sup>104</sup>

Deleuze adopts the position of one who is uncomfortable and problematic, who has been neither a friend, nor an enemy of philosophy, yet is someone who shadows all new thoughts. One that is driven not by the need for acceptance and confirmation, but by a need and necessity, by that what is important. Such a persona is prone to violence. However, this violence is not based on a negation of the one who disagrees, since, here, a notion such as agreement has no meaning. Rather, the violence is fed by multiplication, by a continuous adding rather than rejecting of what is significant. The driving force of what can generate truth is thus violent encounters of different necessities and importance. This comes close to what Deleuze described as Nature, namely a force that “is not attributive, but rather conjunctive: it expresses itself through “and,” and not through “is.” This *and* that – alternations and entwinings, resemblances and differences, attractions and distractions, nuance and abruptness.”<sup>105</sup>

How, then, should we communicate when there are no friends of signification? How is communication possible when there is “too much difference,” as Deleuze puts it?<sup>106</sup> How

<sup>103</sup> Deleuze, *Proust and Signs*, 60.

<sup>104</sup> Gilles Deleuze, Félix Guattari, *What Is Philosophy?* (London: Verso, 1994), 82–83.

<sup>105</sup> Gilles Deleuze, *The Logic of Sense*, (London, New York: Continuum, 2004), 304.

<sup>106</sup> Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Columbia University Press, 1995), 119.

does the violence of many trigger the need for search? If, in this multiplicity, the truth is born from the dissensus, “the dark regions in which are elaborated the effective forces that act on thought, the determinations that force us to think,”<sup>107</sup> how can this be done without falling into the dialectic negation. In other words, how can we maintain the forces of multiplication?

Deleuze points to a condition, a persona that replaces the friend. It is “an invisible, imperceptible dark precursor.”<sup>108</sup> It bears a resemblance to a larval subject that is still in an embryonic state – it is a force of movement that guarantees communication between that which cannot communicate without falling into negation.<sup>109</sup> “The dark precursor is not a friend”<sup>110</sup> since it does not just carry meanings that ensure confirmation and communication.<sup>111</sup> It rather transforms and metamorphoses while communicating. It is not a transcendent but an immanent pre-subjective force of search for contamination.

The dark precursor as a persona of search leads to novelty and creativity. The dissensus emerges in the accident of encounter, when we are forced to search for more relations of transformations: “We search for truth only when we are determined to do so in terms of a concrete situation, when we undergo a kind of violence that impels us to such a search.”<sup>112</sup> In this way, truth, according to Deleuze, is not grounded in affinity, correspondence and signification. The kind of truth Deleuze is writing about is not based on communication or comparison to some “objective content.” Deleuze’s truth is of entering the relation of signs that he understands in a very pragmatic way – as learning by “doing with someone” and not as “doing like someone.” Once again this is reminiscent of Peirce’s definition of signs as “learning by experience.” Yet, Deleuze points out the necessity of experience and encounter when searching for truth. The pursuit of a non-corresponding understanding of truth implies that Deleuze is arguing for a quest for novelty, and primarily, for an inquiry into how new knowledge emerges.

Meanings emerge from an encounter that disrupts, poses questions and demands further search. This is a dark precursor indeed, something never fulfilled, constantly demanding and mapping new relations and conditions of significance. As a result of the material notion of meaning, that is, through the focus on relations of significance, we must continuously practice the search – the investigation of mutations. This search, unlike any logocentric

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<sup>107</sup> Deleuze, *Proust and Signs*, 2008, 61.

<sup>108</sup> Deleuze, *Difference and Repetition*, 119.

<sup>109</sup> *Ibid.*, 118.

<sup>110</sup> *Ibid.*, 145.

<sup>111</sup> “Philosophy, like friendship, is ignorant of the dark regions in which are elaborated the effective forces that act on thought, the determinations that force us to think; a friend is not enough for us to approach the truth. Minds communicate to each other only the conventional; the mind engenders only the possible. The truths of philosophy are lacking in necessity and the mark of necessity. As a matter of fact, the truth is not revealed, it is betrayed; it is not communicated, it is interpreted; it is not willed, it is involuntary.” Deleuze, *The Logic of Sense*, 61.

<sup>112</sup> Deleuze, *Proust and Signs*, 11.

path that focuses on discovering what is there, is grounded in material semiotics and, as such, concerns what becomes important, what demands to be the truth of significance.

However, the final acknowledgment of the equally generating sense of what is significant for a being to exist within its environment creates a new set of problems that call to be tackled in a new kind of way. Significance, after all, is not something that is universally given, in the same way that a moral law or value is. For Uexküll, significance is what belongs to a being in its own *Umwelt*. In order to learn, to know, you have to map all the relations that become important for the being to exist. This means that what the body finds significant, actually constructs this body and therefore has material implications for body's becoming.

Uexküll's study of a tick seems ethically unchallenged – in order to know what a tick does to live, you just have to map its affects. However, if the notion of significance, that what is important for a body, is a driving and generating force, how can we responsibly co-construct meanings? If meaning is not added, is not something that might be transferred unnoticed, and instead is something changeable and open, yet leaves the actual imprint of change on a body, how can we make any cultural and legal decisions? As a result of the constant alterations we cannot know what will be relevant, what will be significant for a body. It thus seems that we must change our attitudes and lose the given criteria of judgement in order to encounter what is yet unknown but remains significant. As Shaviro argues:

Genetics and biotechnology are even more perplexing, since they are less about understanding the external world than they are about experimenting on – and thereby altering – ourselves. We are on the verge of developing the ability to clone ourselves, to tweak our genetic makeup, to hybridize ourselves through gene splicing, to incorporate silicon chips into our brains, to interface machinery directly with our nervous systems, and to reset our neurotransmitter and hormone levels at will. Such practices are inherently risky and unpredictable. How can we come to terms with forms of “knowledge” whose very effect is to change who “we” are? How do we judge these disciplines, when they undermine, or render irrelevant, the very norms and criteria that we use to ground our judgments? What will we do when advances in these practices force us to redefine, ever more radically, what we mean by such basic notions as self, life, humanity, and nature? The new biology, as much as any new work of art, requires us to abandon everything we think we know, and make singular judgments that cannot be subsumed under preexisting criteria. Aesthetics precedes cognition in such cases, because we are dealing with practices that can only be comprehended through the new categories that they themselves create. The question we should be asking, therefore, is not: How can we establish valid criteria and critical standards?

but rather: How can we get away from such criteria and standards, which work only to block innovation and change?<sup>113</sup>

We must lose those criteria that have worked for what we believe to be known, and instead start to imagine methods of practice without them. How can we search for that which is unknown yet which might be significant? It is a pragmatic approach indeed, one that focuses on what is important, and primarily, what might be important. Paradoxically, we already have all the knowledge to do this – we have already developed an understanding of how the relations of significance work, how existential meanings emerge and why these relations are important. We have an experience with art's constant re-shifting of criteria, we are used to experiences without judgements. All that remains is to learn how to use this knowledge.

### 3.9 *Contaminant M* like a Meat Lab

In the work *Eat Less, Live More – and Pray for Beans*, which won Zack Denfeld and Catherine Kramer the “Designers and Artists 4 Genomics Award” in 2012, the artists visualize future scenarios of Dutch food culture and what might be relevant as the climate and global trade changes. In the animated video, *Community Meat Lab Amsterdam* [Figure 20], which formed part of the project, the artists narrate a story of what food culture will be like when mutagen meat becomes an everyday reality.

*Community Meat Lab* is a sort of future collective of DIY biologists, scientists, and meat lovers, but also those in search of company in their life. All these different people gathered in the Lab to share what their love of eating meant to them and to practice the growing of meat, and cooking and eating it together. In this short animation, CGG exposes how our eating habits might change once we start to think in terms of different configurations of what sustainable food might be. Within this project, the artists imagined how the habits of production and consumption of meat might be, once we stop thinking in industrial terms and chasing profits and start to speculate on new ways of living with innovative biotechnological possibilities and the environmental restrictions these possibilities enable. This is a speculative approach that, like the practice of a biologist, puts the actions of relations that may generate new scenarios central, new relations that are driven by what might turn out to be significant.

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<sup>113</sup> Shaviro, *Without Criteria*, 15–16.



Figure 20. The Center for Genomic Gastronomy, *Community Meat Lab Amsterdam*, Vimeo, <https://vimeo.com/50204650>, accessed 6 April 2016.

*Community Meat Lab Amsterdam (video transcript)*

Mrs. de Wolff is a retired nurse and a proud member of the Community Meat Lab, Amsterdam (CMLA). After her husband died she was quite lonely for a while, but now she gets a visit from a member of Community Meat Lab almost every day. Today it's Sophie's turn to donate blood. Having grown up after animal-meat was outlawed in the Netherlands, she has only ever tasted lab meat. Sophie loves food and she joined the CMLA so at least she knows where her meat comes from. After the blood letting is over, they enjoy tea and cake while discussing what to bring for this week's feast.

Joris is in his cleanroom, starting a new batch of cells. Last week he tried using a line of porcupine cells he got from Manchester, but those didn't turn out so well. This week he is sticking to the tried-and-tested goldfish cell line provided to him by his friends in the Community Meat Lab, Houston.

On Sunday everyone is gathered in Joost's living room for supper. Sophie brought a potato salad, and Mrs. de Wolff brought a cake, but nobody will start eating before Julia brings out the meat dish. Finally she enters from the kitchen holding a large platter of Spaghetti Bolognese and says: "Sorry I'm running a little late. The meat was a little tricky to cook this week." Joost nervously pipes in: "Yeah, sorry guys. The power cuts on Friday were killing me! I had to get out the bicycle generator to make sure the gold fish cells got enough exercise!"

Mrs de Wolff is not worried and adds: "Well, thankfully Julia is a marvellous cook. I'm sure it will be delicious as always."

Once everyone is served and people start eating, a content silence spreads across the table, save for the banging of cutlery on plates and the sound of chewing.<sup>114</sup>

In the above transcript of a 2.5-minute animation, CGG imagines, in a humorous and light hearted, yet honest way, what it might be like when animal meat will be banned as a result of easy access to growing meat from cells. Perhaps this ban on animal meat will be for environmental reasons and a result of animal rights laws. The video does not elaborate on this, yet what the artists suggest is a scenario in which our fixed desires induce new habits once the relations of significance change. Driven by the dark precursor of dissensus, of the commons that do not fit into today's reality, CGG touches these new relations of significance. What new relations, habits and practices might be created if our love for meat generates new communities of self-eaters? Once we cannot eat animals, shall we start to eat ourselves?

CGG feeds on what is given and yet the artists twist it to unravel what is not yet there, what might be, and what does not fit. Can a non-anthropocentrism only start with cannibalism? Can a human become a posthuman, egalitarian only when sharing an equal place on the plate? The thought of bodies being sustained through the consumption of our own bodies, albeit on a singular, non-massive production scale, gives philosophical tickles. It opens up weirding spaces and the sense of what bodies and communities might be like. CGG works between the plateaus of meanings, but, unlike Uexküll's bridges, they do not try to connect the various logocentric and material meanings into a single story. Rather, they explore the tensions between them, making them more alive and vibrant as a result of initiating new relations of significance.

### 3.10 An Affect Apprenticeship

While CGG's contaminants narrate curious tastes and ways of eating from challenging recipes, they also prepare their audience and invite them to embrace discourses and materialities of what food is today, but also what it might be. They not only work as apprentices themselves, but they induct the audience into an apprenticeship too. CGG's apprenticeship requires learning about the food first, about each singular history of the body before the act of eating. Ultimately, the 'apprentices' are invited to experiment, to follow and cook the recipes.

Dolphijn stipulates that such an apprenticeship in food tasting has nothing to do with any kind of universality, as ascribed to the notion of taste, and that only the actual

<sup>114</sup>The Center for Genomic Gastronomy, "Community Meat Lab Amsterdam," Vimeo, <https://vimeo.com/50204650>, accessed 6 April 2016.

encounter causes all the relations to happen.<sup>115</sup> He further argues: “what matters is in what way the connection take place.”<sup>116</sup> In other words, what is important is focussing on how the relations happen and how they generate meanings. We are not interested in defining what food is and what the actual ingredients of what we are about to eat are, but rather we are concentrating on taste in terms of entering the multiple relationality that is about to happen. To define what food is, is the most politically absolute and hierarchical act, “It brutally splits up the world into what consumes and what is consumed, construction and destruction.”<sup>117</sup> In terms of CGG’s practice, determining what becomes food happens in the encounter, it is produced in the taste event in the form of a sign, as a risky search for novelty.

An important question arises when we acknowledge the materiality of meaning and start to induce it in our practice: if art already practices the relations of significance, revealing materiality of meaning as equally valid as the signification of truth, what, then, is left for philosophy, for the theoretical and critical thinking about meaning that goes beyond post-experience reflection? How can theory, the words that fill this book, become something material, something living? How should we act within thought to implement such an understanding of meaning? For many who have come before me, the answer lay in overcoming the disciplinary and methodological lacuna between metaphysics and epistemology – something that, philosophy in particular, has failed to do: “in so far as metaphysics is the domain of philosophy, it is largely a failure of philosophy that is has not done more to provide the natural sciences with more adequate conceptual framework with which to study life.”<sup>118</sup>

Speculation, however, as explored through the contaminants featured in this book, might generate new encounters that lead to production of new meanings regarding what might be important once the configuration of relations changes or new bodies emerge. The understanding that the knowledge about bodies is generated by the way we deal with and practice those bodies is vividly present in art’s practice. Nevertheless, while we can experience how such material understanding works through the long-neglected methods of speculation, this does not mean that philosophy has been in the dark all along. As we have analysed with respect to the notion of affect, the consideration of the onto-epistemological nature of our bodies developed long before any of the hard sciences emerged. Today is no different. All the projects that revitalize Spinozian understanding of *affectus* when thinking about and understanding living bodies are still marginalized because they do not fit into the status quo. It is too easy to blame philosophy, as if there is something essentially wrong and fixed in it. Bodies within affect force us to think in terms of relations of significance where meanings are acknowledged as not only being a product of signification, but also

<sup>115</sup> Dolphijn, *Foodscapes*, 13.

<sup>116</sup> *Ibid.*, 15.

<sup>117</sup> *Ibid.*, 17.

<sup>118</sup> Adam C. Scarfe, “Introduction. On a Life-Blind Spot in Neo-Darwinism’s Mechanistic Metaphysical Lens,” in *Beyond Mechanism: Putting Life Back into Biology*, (eds) Brian Henning and Adam Scarfe, (Lanham, MD: Lexington Books, 2015), 41.

of significance. Affect implies that it is a matter of what happen to be important and how we practice this that has actual productive potential. Speculation becomes a way of experimenting with the production of affect. Through speculation in art and philosophy, we create a dynamic relation, also between each other, allowing for relations of significance to be shaped. Through investigation of and search for relations of transformation, we create and are created by the relations of significance.

Importantly, significance works in both ways. As an ethological concept that is present, for instance, in biology, it shows the inscribed relationality and material forms of the generation of living bodies; but it is also as axiological – it allows us to acknowledge views already set according to hierarchical evaluation. It now becomes evident that significance, like the sphere of semiotics, is not only an existential field, but also political – it concerns and implies the organization of relations according to a particular state of bodies, however fluid and temporal they might be.

Meaning formation is not just an epistemological, reflexive activity detached from living bodies. It is a generative, ontological and speculative event. Such comprehension of meaning as significance not only has the capacity to change the internal organization of what we take as knowledge, it primarily reshapes the very ways we produce knowledge and its role. Since meaning is something that not only emerges between bodies, but also changes those bodies, it has much more power than we would like to think. The materiality of meaning may generate new ideas and concepts, helping to acknowledge equally important speculative capacities of thought as already creative and generative. Thus, philosophy and art become intertwined in their material practice of speculation. Nevertheless, the existential meaning that affect generates implies that, depending on what becomes significant, relations can equally destroy, stiffen and fix those bodies – living within affect demands a different way of organizing the practice of the relations of contamination.

Significance within affect opens up the existential character of signs, where meaning is a dynamic and violent result of an encounter. Within affect, relations multiply rather than negate each other. This leads to a different notion of what we think that the agency of that relation is. As Hoffmeyer argues, the embeddedness within semiotics of every living system, forces us to reconsider what we think agency is. As he defines it, agency is “a capacity of a unit system to generate end-directed behaviours.”<sup>119</sup> Agency, for him, is a capacity that is oriented internally and externally towards directed behaviours. It belongs to the various human and non-human entities such as cells, or bacteria. Defined as “end-directed behaviour,” Hoffmeyer presupposes a prior embeddedness in the semiotic field. Agency is thus a capacity “to interpret (whether consciously or unconsciously) events or states as referring to something other than themselves, or in other words, the capacity to interpret signs,”<sup>120</sup> and now we would say, to interpret affects. To practice relations of

<sup>119</sup> Jesper Hoffmeyer, “Why Do We Need a Semiotic Understanding of Life,” in *Beyond Mechanism: Putting Life Back into Biology*, 148.

<sup>120</sup> *Ibid.*, 152.

significance demands a new understanding of agency. What kind of sense of agency can we practice while maintaining the multiplication of relations? How can we think about agency in a way that does not work on the relations of oppositions and that instead organizes bodies according to a dynamic affect event? These are the urgent questions that relations of significance generate, and now it becomes important to encounter them more closely.



# Chapter 4

## Living Within a Multibody

Each multiplicity is symbiotic; its becoming ties together animals, plants, microorganisms, mad particles, a whole galaxy.<sup>1</sup>

### 4.1 Contaminant O like Organs of Multibody

And who is alive? The one is alive whose existentially indispensable organs are living. The place where those organs live has no significance. Here or there – this has for us no difference – the fact that they are alive. And if they are, so does the insured – in the corresponding percentage proportion, to be sure.<sup>2</sup>

It all starts with laughter, more silly and goofy than hysterical or scary. It sounds a bit like someone choking, and one cannot really be sure whether the laughter belongs to a woman or a man. It is non-human, creature-like and yet human, and the voice, while laughing, screams: “bunch of weirdos.” The short movie *Layer Cake* (1968, 35 min.) directed by Andrzej Wajda, with a script by Stanisław Lem, is the grotesque story of Richard Fox, a rally driver, who undergoes multiple organ transplantations after numerous car accidents [Figure 21]. With each accident, he gets a new body part that becomes with him, imperceptibly for Richard himself, yet uncannily expressed within his body movements and style of talking. Man, woman, dog – he becomes all of them. Any attempt to distinguish where one body ends and another starts becomes meaningless – s/he/it becomes multiple.

<sup>1</sup> Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (London [etc.]: Continuum, 2004), 275.

<sup>2</sup> Quote from the movie *Layer Cake* (in Polish *Przekładaniec*) 1968, directed by Andrzej Wajda [all quotes from the movie are translated from Polish by A. A. Wołodźko from the script of the movie: Stanisław Lem, *Przekładaniec* (Warszawa: Agora, e-book, 2012)].

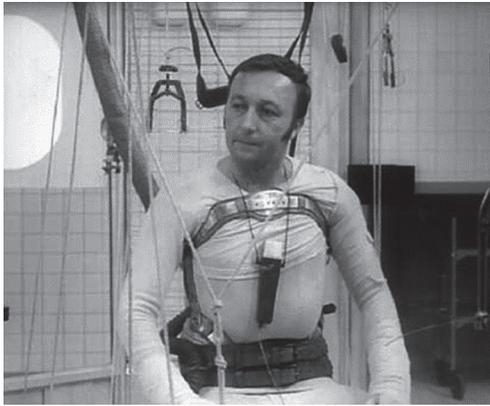


Figure 21. *Layer Cake*, 1968, film frame; Richard Fox after the first transplantation.

However, because each organ is donated from an already “dead” body, Fox is subjected continuously to increasingly complicated insurance claims. The families of the victims, whose body parts Fox now has, can only receive the compensation for parts that were actually buried and were not subsequently “used.” The families demand maintenance payments from Fox, who is now the owner of the organs. Fox seeks help from a lawyer. Unfortunately, as long as medical science “sees” it simply as a matter of “humanitarian help,” the juridical and insurance law cannot be adjusted. As the doctor conducting the transplants explains to the lawyer looking after Richard Fox’s case: “In the face of an unusual number of patients we cannot simply waste these surplus [of body parts]. I guess you understand that? Humanitarianism commands sharing. It is one of those complicated situations that comes with progress.”

How can the rules belonging to fixed identities be applied to multiple and dynamic subjectivities? The lawyer struggles helplessly to solve the multiple claims directed towards Fox. There is a widow of the brother whose body parts Fox has received demanding money for her children; there is a fiancé asking for the return of the gold and platinum transplanted into Fox’s mouth. Finally, there is a claim demanding Fox take responsibility for the children of a woman whose legs he now has. Confused, the lawyer asks for some advice from the doctor who conducts these transplants. Yet the doctor, pressed by urgent medical matters, just states that there are much more complicated cases:

In the last week, Doctor Gregg from Ciminati got eighteen patients simultaneously. The bus transporting those people, fell from a bridge. Eighteen people stepped into the bus, but after the operation it appeared that there are nineteen of them. And now, please imagine the problem of the identity of that nineteenth person! The papers for her.<sup>3</sup> Where is her father? Her mother?

<sup>3</sup> In Polish, the pronoun for a noun ‘person’ has a female form.

From this conversation, it is clear that, for the doctor, bodies are plastic, mutable and in a state of possible transformation. Such matters as personhood and legal identity are secondary and hinder rather than help his work. The lawyer is thus forced to turn to the spiritual point of view held by Fox's psychoanalyst. This seemingly dualistic approach in the story, between physical and material, body and spirit, becomes permanently blurred. As the story unfolds, what is material and spiritual cannot be distinguished, since both levels seem to express each other simultaneously in Fox's multiplicity.

The psychoanalyst demonstrates a discrepancy in his method of loose associations practiced on Fox. Before the accident, "the whole Freud symbolism came down to a vehicle for Fox," the psychoanalyst explains. He would relate darkness with fuse, blood with a red traffic light, the trinity with second gear. However, after the accident, the symbols have changed into flowers, rings and weddings. Yet, as the psychoanalyst assures the lawyer, Fox is not a woman, only partially – like a layer cake. Nevertheless, for the lawyer it becomes gradually incomprehensible who Fox is as he cannot represent the layer cake in court. The psychoanalyst retorts: "Why not? New times – new customs. You will adapt!" The lawyer insists that there must be some leading agency, one that is at the top of the multiple layers of Fox. The psychoanalyst reminds himself that, in the last session, Fox had been slightly aggressive; indeed, he had even bitten him. Therefore, when the lawyer reveals that a dog had been found at the location of the recent car crash, the psychoanalyst calmly decides that he should get a vaccination: "You think that Fox may have rabies?" – the lawyer asks. "Not Fox, the dog," the psychoanalyst replies.

Neither the medical doctor who specializes in the carnality of the body, nor the psychoanalyst who is focused on what is considered as spirit can give a satisfactory answer to the lawyer. Both the doctor and the psychoanalyst approach their patient united by their function multiplicity. It is difficult for the lawyer to analyse Fox's case according to the law, since each layer of Fox never stays on top long enough to take absolute control over the others. The multiple layers of Fox mingle, mutate and grow according to what becomes important for each part. The relations of significance drive them and control the generated agency of Richard Fox, whoever s/he/it might be. In the script, Lem seems to emphasize that there is no logical split between her/his/its spirit and body and, moreover, exactly what is the body stopped being an issue a long time ago. Now, the major problem is how to act as multiple within the old criteria of law and custom that the lawyer personalizes. Can we change the old criteria in a way that responds to the material realities of multiplicity?

The movie ends in the lawyer's office with another visit from a multiple body of Fox. The advocate is glad to see Fox as he has been waiting for him for some time now. Yet, Fox expresses surprise, since he was not even sure if he will choose this lawyer that morning. From the conversation, it becomes obvious that Fox is not Fox, but rather Arie Stevens, Fox's co-pilot. Stevens' laugh, however, coming out of the mouth with golden teeth, is a goofy, slightly hysterical, almost non-human one, screaming: "bunch of weirdos!"

## 4.2 The Laughter of Multiplicity

So what if this new nomadic subject looks,  
feels, and sounds unusual? S/he is monstrous,  
mixed, hybrid, beautiful, and, guess what . . . ?  
S/he is laughing!<sup>4</sup>

Lem begins and ends his speculation on multiplicity with a particular kind of laughter. This laughter is not laughing about something or at something. It is not a clear, resonant sound, one that is easily recognized as belonging to someone or something. Rather, the laughter becomes an expression of the intensity of its becoming. Fox's laughter, contaminated by multiple encounters with bodies, signals transformation, continuous change and further mutations. Through the laughter, we can sense the movement of the changing Fox, who, paradoxically, is not Fox, but Fox becoming another. It is as if, through laughter, we enter the ongoing multiplication and transformation of Fox's body into something both human and non-human. In Lem's story, laughter creates tension, a vibration of intensities that allows us to encounter equally intensive and multiple in their mutations body.

The multibody, or as Deleuze calls it – multiplicity – is an assemblage, a temporary composition of bodies (carnal bodies, thoughts, particles, bacteria, plants, animals, chemicals) in their relationality. Although the multibody, the multiplicity, is a composition of elements, it is not driven by them separately. What constitutes the multibody is the relations in alliance, continuously mingling and changing and driving the multiplicity. Importantly, as Deleuze argues,

The multiple is no longer an adjective which is still subordinate to the One which divides or the Being which encompasses it. It has become noun, a multiplicity which constantly inhabits each thing. A multiplicity is never in terms, however many there are, nor in their set or totality. A multiplicity is only in the AND, which does not have the same nature as the elements, the sets or even their relations.<sup>5</sup>

In that sense, there is no unity of the multibody, as Deleuze with Guattari would argue,<sup>6</sup> but only relations of transformations, relations of AND that disrupt unity, any hint of totality and identification. Each added relation, each AND, already mutates and sets a new flow

<sup>4</sup> Braidotti, *Nomadic Theory: The Portable Rosi Braidotti* (New York: Columbia University Press E-book, 2011), chapter 1.1. "Transposing Differences."

<sup>5</sup> Gilles Deleuze and Claire Parnet, *Dialogues II*, trans. Hugh Tomlinson and Barbara Habberjam, revised edition (New York: Columbia University Press, 2007), 57.

<sup>6</sup> Deleuze and Guattari, *A Thousand Plateaus*, 2004, 9.

of change and transformations – each AND becomes a new *affectus* that creates a new multibody.

How are we to encounter a continuously changing multiple that does not have a fixed identity? Does it make sense to recognize it? Is each moment of identification prone to failure? In other words, how should we live within a multibody? How can we practice multibodies within affect? As Deleuze writes: “In a multiplicity what counts are not the terms or the elements, but what there is “between”, the between, as set of relations which are not separable from each other.”<sup>7</sup> In *Layer Cake*, the laughter is a method to signal how elusive and dismantling the encounter with multiple is. And yet, it is through laughter that we sense the multibody of Fox. The laughter becomes the conduit for the multibody to enter in the middle of the multibody’s transformations – movements that cannot be grasped, identified, but only sensed. Deleuze saw the expression of difference in this kind of laughter; that is, of that which cannot be subsumed into a given, fixed identity. In order to understand how we can express the multiple through laughter and, how, in turn, the multibody emerges and functions, we must linger a little longer on how Deleuze conceptualized laughter. Lem’s “bunch of weirdos” is the ongoing differentiating multiplicity that we now have to learn to encounter.

For Deleuze, laughter is a movement of the intensity of those relations that generate bodies. As such, laughter expresses affect – an encounter that is both dynamic and tense in character. Importantly, laughter understood as affect neither belongs to irony, nor to humour.<sup>8</sup> It rather remains between them, as a movement that produces them. Laughter is “This play of levels of intensity controls the peaks of irony and the valleys of humour.”<sup>9</sup> As Deleuze further explains, “You cannot help but laugh when you mix up the codes. If you put thought in relation to the outside, Dionysian moments of laughter will erupt, and this is thinking in the clear air.”<sup>10</sup>

Laughter becomes an expression of intensity, of difference emerged from the experience of the multiplicity. Interestingly, in his book on Foucault, Deleuze writes that laughter becomes not only an experience of multiplicity, but also a way to resist or even destroy what endangers this multiplicity:

The Divine Comedy of punishment means we can retain the basic right to collapse in fits of laughter in the face of a dazzling array of perverse inventions, cynical discourses and meticulous horrors. A whole chain of phenomena, from anti-masturbation machines for children to the mechanics of prison

<sup>7</sup> Deleuze and Parnet, *Dialogues*, viii.

<sup>8</sup> See Claire Colebrook’s historical analysis of irony within philosophy, where when analysing the notion irony in Deleuze and Guattari’s philosophy, she argues that they prioritize humour over irony: Claire Colebrook, *Irony*, 1<sup>st</sup> edition (London/ New York: Routledge, 2005), 129–49.

<sup>9</sup> Gilles Deleuze, *Desert Islands: And Other Texts, 1953–1974*, ed. David Lapoujade, trans. Mike Taormina (Los Angeles, CA/Cambridge, MA: Semiotext, 2004), 258.

<sup>10</sup> *Ibid.*, 258.

for adults, sets off an unexpected laughter which shame, suffering or death cannot silence. The torturers rarely laugh, at least not in the same way [...] Provided the hatred is strong enough something can be salvaged, a great joy which is not the ambivalent joy of hatred, but the joy of wanting to destroy whatever mutilates life.<sup>11</sup>

Laughter is what bypasses mutilation in favour of mutation. Mutilation presupposes the sense of a closed, perfect whole from which a part is removed, deconstructed or castrated.<sup>12</sup> Laughter becomes rather a mutation and waste – something that has been cut and become waste in the process of mutilation. However, we should not understand waste, here, as something that is at odds with the status quo, what we can manage, arrange and manipulate without consequences. For Deleuze, laughter as waste is not what contradicts, what has failed, what demonstrates lack, since to define waste as such would demand memory. When, in turn, memory fuels laughter, it transforms it into that what is lacking. For instance, when Fox's multibody laughs, s/he/it does not refer to what they are not, to the lack of something. S/he/it – the multiple of Fox – laughs, bringing about yet another dimension. S/he/it multiplies while laughing, laughs while multiplying. Instead of lingering on what is missing, trapped within the dialectical logic of creation through exclusion and lack, laughter becomes a path of affirmation. It emerges and embraces the waste of the cut bodies as "active forgetting."<sup>13</sup> The laughter of waste is negation of negation by affirmation.

Moreover, unlike memory, which works by means of recognition and representation, the active forgetting of laughter does not signify. It is through waste that these bodies transform into multiplicity allowing us, in turn, to think differently from within this multiplicity. Multiplicity forces us to think in terms of affirmation of the unrecognized, unactualized, non-representable and non-communicable. For Deleuze, this embracing of waste operates as the eternal return of that which is cut. What returns in laughter is "neither the default, nor the equal, only the excessive returns."<sup>14</sup> Laughter of waste is not a friendly, agreeing, white-men-patting-themselves-on-the-back laughter. It is rather a laughter of a dark precursor, of convulsions and rolling – the multiple Fox laughing at the "bunch of weirdos" while multiplying.

Lem's imagination of the implications of organ transplantation, although grotesque, exercise the dilemma of the multiple subjectivities of today. He actualizes thinking about bodies, their becoming and generation in terms of relationality, which leads to questioning of the old, fixed concept of identity. He creates situations of tensions expressed in laughter where multiple bodies demand new thinking about dynamic subjectivity. In that sense, in

<sup>11</sup> Gilles Deleuze, *Foucault*, trans. Sean Hand, 1st edition (Minneapolis, MN: University of Minnesota Press, 1988), 23.

<sup>12</sup> "Mutilation, N.," *OED Online* (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/124329>, accessed 31 May 2016.

<sup>13</sup> Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Columbia University Press, 1995) 55.

<sup>14</sup> *Ibid.*, 299.

order to practice the multiple, not only the acknowledgment of multiple must occur, but most importantly, a different logic of thinking.

In *Difference and Repetition*, Deleuze argues how thinking of the multiple, which would force a new practice of self, cannot start with the dominant dialectical negation – logic driven by opposition. The multiplication itself follows a different logic. It is not a simple copying *ad infinitum* of what is there, for instance, numerically multiply what is given. As Deleuze argues, “multiplicity must not designate a combination of the many and the one, but rather an organisation belonging to the many as such, which has no need whatsoever of unity in order to form a system.”<sup>15</sup> The organization of such an understanding of multiplicity is an open system of possibilities that may be actualized, and which may mutate, like genes, Deleuze argues.

Before the widespread acknowledgment of the field of epigenetics, which overcomes the nature-nurture opposition by considering genes and environment both crucial and inseparable in the processes of development,<sup>16</sup> Deleuze describes genes as a relational rather than essentialist fixed given. He explains that, depending on the environment and on multiple relations, genes may or may not be actualized in the incarnation of a particular body. His notion of multiplicity takes shape in the continuous relations, intensities and determination that occur at the level of genes, and the level of species and their environment. In these multilayers, the organization of multiplicity actualizes its transformations:

the double aspect of genes involves commanding several characteristics at once, and acting only in relation to other genes; the whole constitutes a virtuality, a potentiality; and this structure is incarnated in actual organisms, as much from the point of view of the determination of their species as from that of the differentiation of their parts, according to rhythms that are precisely called ‘differential’, according to comparative speeds or slownesses which measure the movement of actualisation.<sup>17</sup>

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<sup>15</sup> *Ibid.*, 182.

<sup>16</sup> “Epigenetics is a term that Conrad H. Waddington (1942) coined to refer quite generally to developmental processes (i.e. how we get from genotype to phenotype), and we have known for a long time that such processes involve far more than DNA. In this sense of the term, epigenetics is not a new field. Also not new is the recognition that the various factors involved in development—nucleic acids (DNA and RNA), metabolites, and proteins; nuclear and cytoplasmic factors; genetics and environment—are so deeply intertwined, so profoundly interdependent, as to make any attempt to partition their causal influence simply meaningless [...] What is new today involves an altogether different reference of the term epigenetic. The ‘field of research called epigenetics’ in the NIH newsletter refers primarily to the discovery that not only are changes in various extra- (or epi-) genetic factors affecting phenotype routinely passed on in cell division, but also such changes can often be transmitted through the generations, despite the fact that they do not involve changes in DNA sequence. Examples of epigenetic inheritance might involve changes in methylation patterns on DNA, or changes in chromatin structure, metabolic requirements, feeding patterns, or even modes of symbolic communication. These alternative “systems of inheritance’ are of immense importance to development; they radically change our understanding of inheritance; and they can also have a profound effect on evolution.” Evelyn Fox Keller, *The Mirage of a Space between Nature and Nurture* (Durham, NC: Duke University Press Books, 2010), 4–5.

<sup>17</sup> Deleuze, *Difference and Repetition*, 185.

The laughter expresses nothing but itself, a sheer affirmation of its transformation, of the bunch of weirdos, mutating and growing. In order to laugh, one first must dismantle the priority of identity. Rather than negating identity, we must simply multiply it to the point where we cannot trace back who/what one was/is, as in the case of Fox's multiplicity. It is not about focusing on identities of the bodies whose parts were transplanted into Fox, but encountering what cannot be traced back. It is about touching the simulacra, which results from an ongoing repetition of the multiplication process itself:

All identities are only simulated, produced as an optical 'effect' by the more profound game of difference and repetition. We propose to think difference in itself independently of the forms of representation which reduce it to the Same, and the relation of different to different independently of those forms which make them pass through the negative.<sup>18</sup>

The laughter that expresses multiplicity thus follows the logic of what Deleuze described as pure difference. In the prevailing understanding, the notion of difference is immediately subordinated to the sense and presupposition of identity – we think about that what is different already with relation to something that it differs from. This false understanding regards difference as already in a relation with resemblance, where the perspective of the viewer, the one who judges, must be present. As Deleuze puts it, "In other words, we do not think difference in itself."<sup>19</sup>

In this way, the way to think difference for its own sake, independent of the logic of identity, of the Same, becomes through relation itself – through what we now call laughter, but which carries the characteristic of affect understood as *affectus*. In *Difference and Repetition*, Deleuze does not yet use the word *affectus*, he rather defines this phenomenon as intensity. Intensity becomes the relation without relata, the movement of itself that oscillates between the horizons. It does not mean that intensity presupposes horizons, the relata, but rather it is a pure movement, it produces those relata:

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 refer 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*.<sup>20</sup>

<sup>18</sup> Ibid., xix.

<sup>19</sup> Ibid., xv.

<sup>20</sup> Ibid., 222 (original emphasis).

In the waste of mutilation, the expression of laughter is the flow of intensities. Here difference escapes identity, here, Deleuze finds the logic that drives the multiplicity – the logic of change. Significantly, difference must be thought of as a value in itself and without any teleological resentment of returning to what is or was – to habits of identity. Moreover, the abandonment of the logic of identity does not lead us into the non-semiotic realm. The phenomenon of difference is the phenomenon of emergence and production of significance. We are in a different logic now, one that, rather than being governed by agreement and confirmation according to what is given, such as the logic of signification, is induced by tension. This logic of multiplicity is driven by the tension of an encounter with what is different, rather than its identity, i.e. it is driven by what escapes identification. As seen in *Layer Cake*, laughter becomes an encounter with darkness, with that which does not signify and what cannot be grasped. It is the dimension of the body where drives (for Deleuze intensities, affects) have no fixed foundation and, as such, the body interprets itself as the enigma of plurality: “The body is a multiform process and is therefore obscure to the conscious spirit, which does not oversee its continual plurality.”<sup>21</sup> The body is the darkness understood not as invisible or impossible to see, but as multilayered multiplicity that cannot be universally grasped.

How, then, can thought be possible in such a space of impossibility of sense and cognitive capture? How can “the logic of intensities” that moves multiplicity reshape the understanding of self, of subjectivity or agency? How, in the dissensus, the waste that drives the movement of differentiations, can we practice this new sense of multiplicity? These are the questions that resist signification through the practice of the politics of differentiations of significance. Mind you, subjectivities of multiplicity are not the solution to the problem of significance, of identities.

When writing about multiplicities and their agencies, I am not interested in the metaphysics of subjectivity, i.e. what the subjectivity is. As I argued earlier, the question of subjectivity is already a question of relationality, encounters within material and discursive entanglement as discussed in the previous chapters. When thinking about multiplicity, once the logic of laughter has been established as the affirmation of difference, which drives this multiplicity, what becomes crucial is how to act as multiple? Following the question that pervades *Layer Cake*, I am focused on how, through laughter, pervading the dark path into difference from which multiplicity emerges, we can function politically and socially? This is a pragmatic question about the possibility and shape of multiplicities’ politics within affect. It is a question posed by Fox’s lawyer, willing to find a way out of the categorical mess our bodies found themselves in. Unlike the lawyer, however, we are not to overcome this categorical messiness of bodies by searching for a perfect law that would subsume and govern them all. Instead, we are to change the categories themselves, so that they can respond to the dynamic and processual character of multibodies.

<sup>21</sup> Eric Blondel, Nietzsche: *The Body and Culture: Philosophy as a Philological Genealogy*, 1<sup>st</sup> edition (Stanford, CA: Stanford University Press, 1991), 211.

In the next section, then, I will discuss what happens when we try to implement the logic of difference, of dissensus, in politics. In other words, how can we actually create the spaces of laughter, of tension through which bodies, in their multiplicity, can emerge? How can we practice laughter as the politics of multibodies?

### 4.3 The Impersonal Within Affect

In *Layer Cake*, the body, its partiality and mutability, is directly juxtaposed with the law and customs. Confronted with the dynamism of the body, and the growing acknowledgment of its multiplicity, the law, based on a presupposition about fixed and autonomous identities, becomes insufficient, unable to exhaust all the realities of this multibody. In the “eyes of law,” the body is something to be managed and categorized according to the given rules. Therefore, under no condition can these rules of law be changed, even if the concept of what the body is has changed. In the story, Lem captures the tension not only between the body and the law, but primarily between the body and its practice, its politics. When thinking about *Layer Cake*, our questions gain a sharpness: how should we move from the politics of rights, which is dominated by signification, to the politics of the relation of significance? In other words, how can we maintain the continuous state of laughter? How should we practice bodies within affect? And finally, how should we practice the affirmation of waste that is a feature of multibodies?

For scholars such as Roberto Esposito and John Protevi, who are occupied, implicitly and explicitly, with the political and biopolitical understanding of affect, the strategic point of thinking about politics differently, one that can respond to a collective and dynamic comprehension of subjectivities, is rethinking the notion of personhood.<sup>22</sup> After all, it is the idea of personhood within politics that helped to manage and control bodies throughout the history.

Whether a life is declared to be personal from the act of conception, at a certain stage of embryonic development, or from the moment of birth, its entrance into the regime of personhood is what lends it unquestionable value. It hardly matters whether one becomes a person by divine decree, through natural means, all at once, or in a series of stages: what counts is the threshold beyond which something generically living takes on a significance that radically changes its legal status [...] Only a life that can provide the credentials of personhood can be considered sacred or qualitatively significant [...] Personhood is seen as the only semantic field that can possibly overlap

<sup>22</sup> Roberto Esposito, *Bios: Biopolitics and Philosophy*, trans. Timothy Campbell (Minneapolis, MN: University of Minnesota Press, 2008); Roberto Esposito, *Immunitas: The Protection and Negation of Life*, 1<sup>st</sup> edition (Cambridge/Malden, MA: Polity, 2011); Roberto Esposito, *The Third Person*, 1<sup>st</sup> edition (Cambridge: Polity, 2012); John Protevi, *Political Affect: Connecting the Social and the Somatic* (Minneapolis, MN: University of Minnesota Press, 2009).

the two spheres of law and humanity, separated as they are by the national ideology of citizenship. This means that a concept like that of human rights is only conceivable and viable through the lexicon of personhood.<sup>23</sup>

The notion of personhood has been a political and juridical determinant of who has rights and who does not. For this reason, the Fox's lawyer in *Layer Cake* is in a struggle to establish his client's identity in order to determine the borders of s/he/it's personhood. Only by establishing borders, can the lawyer legally resolve Fox's case. As the movie explores, however, multiplicity escapes legal categories, it functions according to different norms, if any at all. Hence, in order to form a politics of multiplicity, one that is able to capture and live with Fox's multibody, the possibility of thinking beyond the logic of personhood becomes crucial.

In order to be able to think otherwise than according to the demands of personhood, it becomes imperative to consider what enforces the idea of a person. Giorgio Agamben's distinction between *bios* and *zoë* can be considered as the entry point for grasping the vast implications of what the notion of personhood entails. Agamben argues that since Ancient Greek thought, these two terms have shaped our understanding of what is considered as life: *zoë*, which denoted a simple "fact of living common to all living beings" and *bios*, which stands for a "way of living proper to an individual or a group."<sup>24</sup> In this distinction, *bios* is the sphere of *polis*, the domain of logos and language and, as such, it was used to describe human life, its agency and subjectivity. Only in the sphere of *bios* can the notion of personhood be developed and practiced. *Zoë*, on the other hand, denoted the sphere of non-human, bodily nature. This implied that, even if humans share *zoë* with other beings, *zoë* must still be excluded from the sphere of social *bios*.<sup>25</sup> Within *zoë*, in other words, there was no possibility of becoming a person and practicing personhood.

Within the sphere of *bios*, carnality and law can be united through the concept of personhood, life and logos. This distinction between *bios* and *zoë* thus had an influence on the performative character of the notion of personhood, shaping the management of bodies. As Esposito argues, the understanding and practice of this *bios/zoë* schism "is based on the assumed, continuously recurring separation between person as an artificial entity and the human as a natural being, whom the status of person may or may not benefit."<sup>26</sup> The notion of person was thus not inherent to all human beings, but only to those endowed with political and social rights. Importantly, Esposito explains that those rights belong to

<sup>23</sup> Esposito, *The Third Person*, 2–3.

<sup>24</sup> Giorgio Agamben, *Homo Sacer. Sovereign Power and Bare Life*, trans. Daniel Heller-Roazen (Stanford, CA: Stanford University Press, 1998), 1.

<sup>25</sup> See Agnieszka Anna Wołodźko, "Between Bio(s) and Art – Intensities of Matter in Bioart," in *Innen - Außen - Anders: Körper im Werk von Gilles Deleuze und Michel Foucault*, (eds) Ann-Cathrin Drews and Katharina D. Martin, (Edition Moderne Postmoderne. Publisher, Transcript Verlag, 2017), 221–236; in my article, I develop this differentiation between *zoë* and *bios* in the context of bioart's practice and Braidotti's understanding of biogalitarian thinking.

<sup>26</sup> Esposito, *The Third Person*, 9

the idea of personhood and have been given with regard to the demonstration of possession of rational capacities and spirituality.<sup>27</sup>

Through the notion of personhood, human beings can exercise the power over their “animal being”. This involves that, when deprived of personhood, one is not the owner of one’s body. At the same time, in order to own your body, the body itself must be deprived of the personhood. In that sense, personhood becomes something beyond carnality and, moreover, it is something shaped by the possibility of control over the body.

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 a simple biological life, “disposable matter in the hands of the despotic force of unchecked power,”<sup>28</sup> as Braidotti warns. *Zoë* has been considered to be a threshold of moral, social and cultural values, shaping the politics and practices of how subjectivities are constructed and managed. *Zoë* is a reminder of the bodily possibility of humans to become dehumanized and de-personalized. Furthermore, 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.”<sup>29</sup> Thus, when any form of egalitarian approach to *zoë* and *bios* emerged, implementing the dynamic and collective understanding of multibody, for some, it was a sign of a reductive phase.<sup>30</sup> According to Agamben, for instance, *bios/zoë* egalitarianism is characterized as a time of decadence, revealing “the abyss of totalitarianism that constructs conditions of human passivity.”<sup>31</sup> In other words, when the separation between *bios* and *zoë* has been abandoned, it is considered to cause humans’ continuous regression to the non-human.

However, as Rosi Braidotti argues, instead of treating the sphere of *zoë* in terms of negative dialectics about what threatens de-personalization and regression, exactly the sphere of non-person *zoë* promises a new kind of politics concerned with multibodies.<sup>32</sup> Since the problem that the notion of person promised to manage – that is, the formulation and guard of rights and dignity – is continuously blurred and broken, the notion of person should be dismantled as it induces inequality and divisions. On the grounds of sustaining the logic of rights and dignity, the notion of personhood gives premises to decisions about who has rights and who does not. Furthermore, contemporary discourses around personhood and ownership of the body, regardless of the politics, end up treating and presupposing the body to be a thing, focusing on who deserves life and who does not.<sup>33</sup> As Esposito argues,

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<sup>27</sup> Ibid., 11.

<sup>28</sup> Braidotti, *The Posthuman*, (Cambridge: Polity, 2013), 120.

<sup>29</sup> Ibid., 39.

<sup>30</sup> Agamben, *Homo Sacer*, 4.

<sup>31</sup> See Braidotti writing on Agamben’s radical opposition between *zoë* and *bios* in Rosi Braidotti, *Transpositions: On Nomadic Ethics* (Cambridge: Polity, 2006), 39.

<sup>32</sup> Braidotti, *The Posthuman*, 60.

<sup>33</sup> Esposito, *The Third Person*, 92.

“personalization and depersonalization are nothing but different flows of the same process, one that is ancient in origin but whose effects are far from being exhausted.”<sup>34</sup> Either the notion of the person or the pursuit of going against personhood as de-personalization channels the same logic of relation of exclusion governed by separation and subordination not only between humans, but also between humans and other species’ bodies and lives.

Multibodies demand a different politics, one not based on the dialectical relation of negation, but rather on affirmative co-dependence. In the specific relation between *bios* and *zoë*, rather than focusing on the dialectics of exclusion that marks the commodifying practices over the bodies, the politics of multibodies can be shaped in a more affirmative way. Esposito’s analysis is crucial here, since, as he argues, what is shared by *bios* and *zoë* is not mutual opposition, but rather the shared dimension of impersonality. I argue that this notion of the impersonal, when acknowledged as an affirmative phenomenon generating rather than excluding bodies, can have a transformative impact on the politics of multibodies within affect. In order to grasp the scope of this impact, Lem’s notion of the multiple as a dynamic collective of Fox, which contaminates the habits of the logic of identity is crucial in this regard.

Fox is a temporary assemblage. The multiples of Fox are the mutating elements and materials that “uproot” their specificity within the encounter in favour of becoming-one-with.<sup>35</sup> Fox’s multiplicity does not aspire to culminate in or reach some desired form or identity.<sup>36</sup> If they – the collective of Fox – have a goal, it is to continue the movement of laughing: “bunch of weirdos” the laughter laughs. Laughter as a movement that escapes containment and being pushed into a fixed state, is chaotic and contingent. The laughter of a mutating multibody is a nomadic movement that is about “blurring boundaries without burning bridges,” as Braidotti argues.<sup>37</sup> In this way, the collective is produced and producing. To establish when one part begins or ends is impossible. The multiple slips in the very moment when one tries to point to or measure it. In the moment of measurement, the apparatus and what is being measured mingle into “complex agential intra-actions of multiple material-discursive practices”<sup>38</sup> – into an intra-action movement of laughter, to use Karen Barad’s words.

In thinking about an already multiple body, the notion of the collective is transformed from a sense of property into dynamic and relational phenomena. The agency of that collective is not something given or something that belongs to the nature of the body. Rather, it is a practice and an event of a continuous material and discursive encounter. In that sense, multiplicity is not a metaphor, but an actual, material socio-geographical

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<sup>34</sup> Ibid., 99.

<sup>35</sup> Deleuze and Guattari, *A Thousand Plateaus*, 285.

<sup>36</sup> Ibid., 24.

<sup>37</sup> Rosi Braidotti, *Nomadic Subjects* (New York: Columbia University Press, 1994), 4.

<sup>38</sup> Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press Books, 2007), 140.

happening.<sup>39</sup> The multiplicity that we already are demands a rethinking of agency in terms of what we discussed in the first chapter along with Barad's intra-action:

the primary ontological units are not "things" but phenomena – dynamic topological reconfigurings I entanglements I relationalities I (re)articulations of the world. And the primary semantic units are not "words" but material-discursive practices through which (ontic and semantic) boundaries are constituted. This dynamism is agency. Agency is not an attribute but the ongoing reconfigurings of the world. The universe is agential intra-activity in its becoming.<sup>40</sup>

Lem's creation of the multiplicity of Fox, played by the actor Bogumił Kobiela, generates the imperceptibility of the continuously mutating layers using gestures, voices and the body's movements [Figure 22]. In this way, the movie generates the dynamic play of mutation within multiplicity that is not linear and singular – it is not simply a matter of the problem of transplantation itself. It is not only the surgical cut that causes Fox's body to become multiple, but also its multiple discursive and physical enactments, which play a role in generating this multiplicity. In other words, multiplicity as the event of intra-action happens on many layers, in the many folds of the impersonal – s/he/it.

The impersonal, what I shall now call s/he/it (in subsequent sections I will reveal the importance of the sound of its pronunciation) is already situated in the personal, rather than outside of it. It is neither de-personal, it does not oppose the person, nor should it be presumed in terms of a personal pronoun such as "we," which implies, after all, generalization and appropriation according to a given identity. The point is rather to change the logic that dominates the understanding of personhood – a logic and language that cannot actually talk about the body without presupposing the opposition between animal and vegetal dimensions and spiritual, rational ones. Multiplicity, rather than species and amounts, regards the dynamism of phenomena.

Esposito proposes that the impersonal ought to be thought of in terms of the third person, which "means creating an opening to a set of forces that push it beyond its logical and even grammatical boundaries."<sup>41</sup> Notably, he stipulates that the third person should not be understood as another person. Unlike phenomenology, which, despite its claim to overcome the hierarchy between relating agents, thinking is driven by the logic of a

<sup>39</sup> "A figuration is a living map, a transformative account of the self—it's no metaphor. It fulfils the purpose of finding suitable situated locations to make the difference between different locations. Being nomadic, homeless, a migrant, an exile, a refugee, a tourist, a rape-in-war victim, an itinerant migrant, an illegal immigrant, an expatriate, a mail-order bride, a foreign caretaker of the young or the elderly of the economically developed world, a global venture financial expert, a humanitarian relief worker in the UN global system, a citizen of a country that no longer exists (Yugoslavia, Czechoslovakia, the Soviet Union)—these are no metaphors, but social locations." Braidotti, *Nomadic Theory*, chapter: "Introduction."

<sup>40</sup> Barad, *Meeting the Universe Halfway*, 141.

<sup>41</sup> Esposito, *The Third Person*, 14.

constant opposition and reference between the first and second person, the third person initiates a different perspective. For Esposito, the third person “extends out of the logic of the person in favour of the different regime of meaning.”<sup>42</sup> The impersonal is thought of in terms of the singular that, rather than operating within the system of rights, calls for a sense of responsibility and obligation.



**Figure 22.** *Layer Cake*, 1968, film frame; the lawyer is on the left, the multiple Richard Fox “is/are” on the right, <http://www.iluzjon.fn.org.pl/filmy/info/1200/przekladaniec.html>, accessed 17 March, 2017.

The new logic of the impersonal requires us “not to think the neutral [...] but rather to think in the neutral.”<sup>43</sup> However, while providing ways to think differently about the concept that can change politics, Esposito does not really explain how this different logic would work in practice. How would responsibility and obligation work differently from the system of rights? In other words, how, considering the changed logic and non-dialectical sense of relationality, would the notion of the impersonal work? What kind of implications would the impersonhood paradigm have for biopolitics, politics concerned with living bodies?

John Protevi seems to go further than Esposito, suggesting that implementing affect in the politics of political physiology will allow us to break with the tradition of the radical split based on hierarchy and relation of exclusion between what is carnal and what is political. By implementing affect in political practice, we can find new strategies that, rather than being based on moral laws, are based on relations of significance. As he argues, if affect is

<sup>42</sup> *Ibid.*, 16.

<sup>43</sup> *Ibid.*, 131.

“the ability of bodies to form assemblages with other bodies”<sup>44</sup> where one body becomes a co-constitutive part of other body, affect allows us to think about the body in a political way, outside the regimes of personhood. Protevi described affect as being already political, giving a particular ethical shape to politics that is organized according to questions such as: “Does the encounter produce active joyous affect? Does it increase the *puissance* of the bodies, that is, does it enable them to form new and mutually empowering encounters outside the original encounter?”<sup>45</sup>

I argue, therefore, that, through affect as the onto-epistemological understanding of bodies coupled with the impersonhood logic of thinking about their agency, we can construct, as Protevi signals, not only a new shape of politics, but also new practices. My approach responds thus to the multiple character of bodies, where it is not comparison and application as a means of treatment that is practiced, but the mapping of relations of significance according to what stimulates the power of multibodies to multiply. In this way, what is important for the body to continue its conatus is the measure of politics. As Braidotti argues, such politics would focus on the increase in bodies’ power (here understood as *potentia*), rather than exercising the law and rights over them (power as *potestas*). It is thus politics that sustains relations, by keeping the processes of change and transformation floating. As such, affective politics is not about maintaining the status quo, but about “feeding” the multiplicity with more relations that accelerate s/he/it’s capacity to have more relations.<sup>46</sup>

Overcoming the *bios/zoë* dichotomy requires creating strategies for multibody politics and practice. For Braidotti, the *bios/zoë* egalitarianism of co-construction has deep ethico-political consequences. It gives way to a non-anthropocentric shift in thinking, which she calls “bio-centred egalitarianism.”<sup>47</sup> However, this egalitarianism should not be understood as a lack of difference that subsumes all into the one category of “we”. What the concept of multibodies forces us to encounter goes beyond the notion of belonging to something. Its relational, impersonal dimension hints rather at the notion of belonging-with that is beyond species division. Moreover, as Braidotti argues, such bio-centred egalitarianism would lead directly to a new relationship with the non-human through the multiplicity of the body; and, as she further argues, this capacity seems to be already embedded in the practices and discoveries of the life sciences: “Contemporary scientific practices have forced us to touch

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<sup>44</sup> John Protevi, *Political Affect: Connecting the Social and the Somatic* (Minneapolis, MN: University of Minnesota Press, 2009), 49.

<sup>45</sup> *Ibid.*, 51.

<sup>46</sup> Affective politics “[...] has to do with the capacity to endure, to “sustain” the process of change or transformation. Duration and endurance are also ethical categories to do with sustainability, not just aesthetics one. Sustainability emerges (again) as the guiding principle of these intensive methods of analysis.” Braidotti, *Nomadic Theory*, chapter 8: “Complexity Against Methodological Nationalism.”

<sup>47</sup> Rosi Braidotti, *Transpositions*, 37.

the bottom of some inhumanity that connects to the human precisely in the immanence of its bodily materialism.”<sup>48</sup>

In the next section, I will discuss how the scientific findings in life science already expose the fact that multiplicity is not only discursive and conceptual, but, rather awkwardly, a physical phenomenon that we still need to confront. In order to grasp the challenges and possibilities of practicing multibodies, we will look at today’s biotechnological multibodies. Even Lem could not predict the physical dimension of multiplicity that is the multiplicity of the microbiome that we already are.

#### 4.4 Contaminant S like S/H(e)/It

In February 2016, Leiden University Medical Centrum opened the Netherlands’ first faecal bank, *Nederlandse Donor Faeces Bank* (NDFB).<sup>49</sup> Since 2012, when the first stool bank *OpenBiome, The Microbiome Health Research Institute*, was launched in Medford, Massachusetts (United States), faeces banks had only opened in France and the United Kingdom.<sup>50</sup> Although institutionally in its infancy, the first documented faecal transplantation, used to treat food poisoning and severe diarrhoea, took place over 1700 years ago, in China, and was performed by someone called Ge Hong.<sup>51</sup> Known in the sixteenth century as yellow soup, a euphemism designed to distract from the origin of the medicine, faecal transplantation was employed to treat abdominal diseases, fever and vomiting.<sup>52</sup>

However, despite the reach and long medical history of the treatment, the procedure has only recently been standardized in Western medical practice, resulting in the growing presence of donor banking and commodification of the “healthy” stool.<sup>53</sup> Known today as faecal microbiota transplantation [FMT], it is the transplantation of filtered stool from a healthy donor into the gut of the patient with a particular disease, for instance,

<sup>48</sup> Rosi Braidotti, “Locating Deleuze’s Eco-Philosophy between Bio/Zoe-Power and Necro-Politics,” in *Deleuze and Law*, (eds) Rosi Braidotti, Claire Colebrook et al. (Palgrave Macmillan, London, 2009), 96–116.

<sup>49</sup> ‘Nederlands Eerste Feces-Transplantatiebank Geopend in Het LUMC | LUMC’ [First Netherland’s Faecal Transplantation Bank opened in the LUMC - Leiden University Medical Center], <https://www.lumc.nl/over-het-lumc/nieuws/2016/februari/Nederlands-eerste-feces-transplantatiebank-geopend-in-het-LUMC/>, accessed 18 June 2016.

<sup>50</sup> Tina Amirtha, “Banking on Stool despite an Uncertain Future,” *Science* 352, no. 6291 (June 9, 2016): 1261, doi: [org/10.1126/science.352.6291.1261](https://doi.org/10.1126/science.352.6291.1261).

<sup>51</sup> Faming Zhang et al., “Should We Standardize the 1,700-Year-Old Faecal Microbiota Transplantation?,” *The American Journal of Gastroenterology* 107, no. 11 (November 2012): 1755, doi: [10.1038/ajg.2012.251](https://doi.org/10.1038/ajg.2012.251).

<sup>52</sup> *Ibid.*, 1755.

<sup>53</sup> If you live in the US, provided that you are healthy, not obese and under 50, your faeces can be worth 40 dollars per sample. In the Netherlands, payment for any organ donation is banned, but the faecal bank charges the patient 145 euros per faecal dose. See Amirtha, “Banking on Stool despite an Uncertain Future,” 1261–62.

Clostridium difficile infection.<sup>54</sup> The procedure, which aims to restore the balance of the gut microbiome can be carried out using a nasogastric or nasoduodenal tube (insertion through nose), a colonoscope or enema (insertion through the rectum), or by ingestion of capsule (insertion through mouth).<sup>55</sup> Since its standardization, it has proved successful in treating the Clostridium difficile infection, and is considered to be a promising option for treating other diseases. However, the indecisiveness of the results and the vagueness of the policies relating to this method is simply due to the fact that studies of the microbiome have only recently adopted a non-pathogenic focus, revealing a more symbiotic understanding of its role.

Most importantly, the procedure of faecal transplantation reveals not only the multiple character of our bodies, that we are already multiple, but also that, within our practices and ways of living, we are highly dependent on the multiple that we are. The multiple does not only occur through the transplantation of bodies as in *Layer Cake*; indeed, the multiple is a way of our being. This shift in approach has not only started to change medical practice, but also our thinking about who we are, and how our bodies may live within multiple socio-cultural spheres.

Since 90 per cent of our cells are said to belong to these microbes,<sup>56</sup> which are basically bacteria, archaea, fungi, viruses, protists, and microscopic animals,<sup>57</sup> the researchers now induce a new image of the body, suggesting that we have always been multiple. Their early findings raise serious questions regarding the *bio/zoë* politics of exclusion. While destroying the old autonomous and hierarchical image of bodies and the idea of health, the researchers also consider the gut microbiota to influence and shape our emotion and thought,<sup>58</sup> blurring comfortable boundaries between reason and emotion, between mind and body.

The “newly” discovered lack of distinction between our faculties and organs, between human and non-human, which grant microbiota a great influence on our way of thinking, renders Lem’s speculation to “come true.” With each transplantation, we not only get new microbiota, but, as some researchers argue, we become that microbiota<sup>59</sup> – we appear

<sup>54</sup> Faith Rohlke and Neil Stollman, “Fecal Microbiota Transplantation in Relapsing Clostridium Difficile Infection,” *Therapeutic Advances in Gastroenterology* 5, no. 6 (November 2012): 403–20, doi.org/10.1177/1756283X12453637.

<sup>55</sup> Hyun Ho Choi and Young-Seok Cho, “Faecal Microbiota Transplantation: Current Applications, Effectiveness, and Future Perspectives,” *Clinical Endoscopy* 49, no. 3 (2016): 257, doi:10.5946/ce.2015.117.

<sup>56</sup> Janice Dietert and Rodney Dietert, “The Sum of Our Parts | The Scientist Magazine,” *The Scientist*, <http://www.the-scientist.com/?articles.view/articleNo/43379/title/The-Sum-of-Our-Parts/>, accessed 23 May 2016.

<sup>57</sup> Vanessa Rivera Amill, “The Human Microbiome and the Immune System: An Ever Evolving Understanding,” *Journal of Clinical & Cellular Immunology* 5, no. 6 (2014): 1.

<sup>58</sup> There is “growing realization that the gut–brain axis, the bidirectional communication between the digestive tract and the brain, plays a key role in maintaining brain health and the stress response.” Timothy G. Dinan and John F. Cryan, “Mood by Microbe: Towards Clinical Translation,” *Genome Medicine* 8, no. 36 (2016): 1.

<sup>59</sup> Rosamond Rhodes, Nada Gligorov, and Abraham Paul Schwab, (eds) *The Human Microbiome: Ethical, Legal and Social Concerns*, 1<sup>st</sup> edition (Oxford/New York: Oxford University Press, 2013).

to have much in common with the multibody of Fox, always in a state of becoming and transformation.

Nevertheless, when closely considered, there is a tint of old presupposition in the new discoveries of our multiple microbiomes. As if we were enacting the *Layer Care* ourselves, the old categories of identity, ownership and personhood continue to be applied, despite their inability to grasp the multiplicity and collectiveness of microbiome. The transformative capacities of multibodies that we are, seem to be wasted. In order to understand how the practice of multibodies is possible, we must critically analyse the present medical discourses on microbiome, which seem unable to grasp the radical political and cultural shifts caused by their findings.

## 4.5 Facing Superorganization

The research on microbiome beyond antiseptic aims has its grand beginning in the Human Microbiome Project (HMP) founded in 2008. Similar to the Human Genome Project (HGP), a previous project on this kind of extensive and interdisciplinary scale, the HMP aims at “comprehensive examination of microbial communities” in human bodies and “analysis of its role in human health and disease.”<sup>60</sup> Since its establishment, the awareness of the vast implications, not only for medical, but also environmental, social and simply humanistic (ontological) understanding of the human and self, has been thus expanding. The first major conclusion of such an awareness is the propagation of a new image of a body. Analogous to the revelation of the HGP, whose researchers proudly announced that we can put the information about humans on one CD, scientists are now talking about human bodies as “superorganisms.”

The conceptualization of our bodies within the frame of a “superorganization” seems to reflect an understanding that bodies not only construct parasitic relationships, but also non-pathogenic, mutually symbiotic alliances.<sup>61</sup> The necessary entanglements of microbes with the immune system has been recognized as making microbes not only as other bodies residing in our body, but rather an “essential part of ourselves.”<sup>62</sup> Such mutually symbiotic

<sup>60</sup> “Human Microbiome Project DACC - About the HMP,” <http://hmpdacc.org/overview/about.php>, accessed 23 May 2016.

<sup>61</sup> The symbiotic nature of microbes has been researched by Lynn Margulis since the late 1960s. However, her work on endosymbiosis, which shows that all organisms derive from symbiosis with bacteria, blurring the established boundaries not only between species but also disciplines, has not been without contestation, and was often declared to be “the botanical myth;” see Antonio Lazcano and Juli Peretó, “On the Origin of Mitosing Cells: A Historical Appraisal of Lynn Margulis Endosymbiotic Theory,” *Journal of Theoretical Biology*, The origin of mitosing cells: 50<sup>th</sup> anniversary of a classic paper by Lynn Sagan (Margulis), 434, no. Supplement C (December 7, 2017): 80–87, [doi.org/10.1016/j.jtbi.2017.06.036](https://doi.org/10.1016/j.jtbi.2017.06.036). See also Lynn Margulis, *Symbiotic Planet: A New Look At Evolution*, revised edition (New York: Basic Books, 1999).

<sup>62</sup> Richard L. Gallo, Thomas Hultsch, and Lauge Farnaes, “Recognizing That the Microbiome Is Part of the Human Immune System Will Advance Treatment of Both Cancer and Infections,” *Journal of the American Academy of Dermatology* 74, no. 4 (April 2016): 772.

relations between our bodies and microbes leads to the conclusion that “microbiome not only affects us but is in fact ‘us.’”<sup>63</sup>

Regardless, however, of the conceptual potential to unsettle the given human boundaries, from which we can deduce that we have actually never been human, many scholars continue to follow the old logic. The potential of contaminating multiplicity for transformation seems to go unnoticed, since contamination is seen according to the logic of purity. In their persistence in writing about our bodies as forms of a super organization between different species, they call for the necessity to rethink the sense of personhood and self with regard to the criteria of personal medicine. Rather than focusing on a dynamic approach to health, there is a tendency to look for individualization of treatments that would be better equipped for treating such a complex “super” organization. As a result, in 28 mostly medical publications on microbiome ethics, funded by HMP, the authors point out the “dramatic implications for how we think of ourselves because it [the microbiome] challenges the view of ourselves as atomistic individual organisms.”<sup>64</sup> As they notice, the growth of bacteria is dynamic and highly interactive with the surroundings, which render our bodies equally dynamic and interconnected with them.

Human evolution is not just human history, but the story of our interaction with the viruses, fungi, and bacteria that inhabit us. Learning more about the microbiome is likely to change the way medicine is practiced. It may also have implications for our social and legal systems.<sup>65</sup>

With such a strong co-relation and co-existence, there are problems of personhood and identity, property and privacy that need to be rethought.<sup>66</sup>

Indeed, these problems, which result from the newly discovered and hypothesized roles of microbiomes, may appear even more profound than the implications of biobanks, biopiracy, life commodification and gene patenting combined. Although the understanding of microbiome is still in its infancy, it has already been indicated that the microbiome of, for instance, our faeces, “may tell the story of where I have been and with whom I have associated.”<sup>67</sup> Such findings pose a challenge to the growing demand for stool banking and faecal transplantation, which renders the stool yet another commodity. After all, your own stool holds much more information on and have an actual material influence in shaping who you are than a DNA sample. Moreover, since microbiome is inheritable, it also carries information about our parents, families and previous generations. Such a relational understanding of microbiome should radically change our focus from an essentialist and

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<sup>63</sup> Ibid.

<sup>64</sup> Rhodes, Gligorov, and Schwab, *The Human Microbiome*, 1–2.

<sup>65</sup> Ibid., 2.

<sup>66</sup> Ibid., 6–8.

<sup>67</sup> Ibid., 9.

identity inquiry into what the body is, to the Spinozian question of what it does and how we should practice bodies. From our Spinozian perspective, the urgent question is thus how may politics and habits radically change their relevancy in the face of such ongoing mutating and relating multiplicity?

In recent decades, we have concentrated on preventing the manipulation of the genome. Any attempt to transform the body on the genetic level has been fiercely debated and monitored. The fear of an irreversible mutation has been heightened following the invention of “cheap, quick and easy” CRISPR technology for gene editing.<sup>68</sup> CRISPR has reinvigorated not only the discussion on designer babies and human enhancement,<sup>69</sup> but also the fear of heritable changes in the genome that this technology implies.<sup>70</sup> However, with the new findings on the role and function of microbiome we are already susceptible to cross-generation modulations. Focused on the “bio-technological,” we have neglected the everyday contamination and generation of our bodies by such factors as our lifestyles, what and how we eat, our hygiene and even with whom, human and non-human, we associate. Each encounter renders material modulations and structural changes. Contaminations happen already imperceptibly, without a surgical intervention, a dose of medicine or gene therapy. We are already multiple, mutating and transforming without the scalpel. The HMP scientists raise the spectre of losing what, after all, was never there, namely the fixed and autonomous body. Does this mean further restriction of not only biotechnological practice, but also our everyday socio-cultural life?

Imagine how life might be if we insist on applying the old categories of identity and autonomy as our standard of ethics and understanding of law and politics? We might wake up one day in a world where there are obligatory microbioscans before you are allowed to enter a building, or before you are accepted to some institution, granted insurance or simply served in a shop. However, it can be otherwise. The multibody that we are may foster different ways of thinking and practicing multibodies. We could live in a culture where each house has an in-built pet microbiome garden as standard, as common as a running water or having a bathroom in Western societies. Future generations of pupils may take animal care classes and have obligatory lessons not just in maths and languages, but in gardening. The entire system of education might be designed in a way that could implement knowledge of how to practice and generate new microbiome relations and alliances, rather than fostering neoliberal self-care and autonomous self-improvement.

<sup>68</sup> CRISPR (clustered regularly interspaced short palindromic repeats) technology allows for the quickly editing and modelling of the DNA of any organism in accordance with a desired aim. It is particularly appropriate for use in gene therapy. See Heidi Ledford, “CRISPR, the Disruptor,” *Nature News* 522, no. 7554 (June 4, 2015): 23, <https://doi.org/10.1038/522020a>.

<sup>69</sup> With CRISPR, the implications of gene editing may be close to those depicted, for instance, in the movie *Gattaca* (1997), where social inequalities are enforced by the economic and cultural demand for human enhancement. See, for instance, Antonio Regalado “Engineering the Perfect Baby,” *MIT Technology Review*, <https://www.technologyreview.com/s/535661/engineering-the-perfect-baby/>, accessed 22 June 2016.

<sup>70</sup> Ledford, “CRISPR, the Disruptor.”

However, the scholars of HMP, instead of initiating new conceptual thinking that would allow for relational scenarios and habits, seem to want to examine whether the multiple relationality with microbes “will influence our conception of who we are.”<sup>71</sup> Their worry regarding the influence of microbes on the concept of self reveals the actual power of existing categories. To put it differently, their concern is how to adapt the multiplicity of our bodies to the given categories of identity and law. Instead of asking how we can change those categories, which have proven insufficient for grasping the complexity and plasticity of the impersonality of multiplicity, the trend is now to come up with new policies of control and management. In the face of their findings, the HMP researchers are unable to think other than within the laws of personhood and identity. In other words, they prefer to expand what Agamben distinguished as *bios* on what is left of *zoë*.

The quest to adjust the multiple, rhizomatic, non-hierarchical way of life of microbes into the logic of identity upholds the existing opposition and hierarchies of *bios*. By strengthening given identity schemes, the patterns of practices are also strengthened and enforced. The ideas that urges us to take responsibility for maintaining the health of the super-other that is the microbiome is just one example.<sup>72</sup>

Heather Paxson described the practice of a continuation of the status quo within biopolitics regardless of the new findings a “pasteurian practice.” As she argues, “pasteurian practices configure microbes as elements to be eliminated so that human politics might be cultivated.”<sup>73</sup> Today’s calls for the care of your microbes as the care of self is inscribed in antiseptic societies driven by the presupposition of autonomy, demanding protection on the basis of clear identification of the excluded other. Paxson thus signals a post-pasteurian move, particularly in the dairy industry, that goes “beyond an antiseptic attitude to embrace mould and bacteria as allies.”<sup>74</sup> The creation of new alliances, rather than protection of the old autonomies, is thus a growing trend in the way of thinking about bacteria. What is more, such practice of an open relationality with the microbiome will not only change the food industry, but, as Paxson argues, has deep ontological consequences for the way how we think and act as humans. The final acknowledgment of multiple alliances of bacteria may change our already distorted view of humans and the social world:

Pasteurianism is a biopolitics predicated on the indirect control of human bodies through direct control overmicrobial bodies. It contributes to the production of rational risk-minimizing subjects and to a governmentality devoted to managing public risk.<sup>75</sup>

<sup>71</sup> Rhodes, Gligorov, and Schwab, *The Human Microbiome*, 55.

<sup>72</sup> *Ibid.*, 70.

<sup>73</sup> Heather Paxson, “Post-Pasteurian Cultures: The Microbiopolitics of Raw-Milk Cheese in the United States,” *Cultural Anthropology* 23, no. 1 (2008): 17.

<sup>74</sup> *Ibid.*, 18.

<sup>75</sup> *Ibid.*, 36.

Post-pasteurian practices urge working with the microbes rather than against them. Yet, as Paxson warns, the post-pasteurian emphasis on working with bacteria may become a new trend in terms of industries driven by profit, which, rather than changing politics, will only strengthen the neoliberal belief in the right to individual autonomy. The discovery of the crucial role of microbes for our existence, regardless of the intensity of the relation that actually makes what it means to be human, may ultimately lead to even more self-centred biopolitics of governance. If the care of the self is to care for microbes, the economic and industrial applications of obligatory microbiome scanning may be just the start in the era hyper-biopolitics.

The future of omnipresent scanning, under the premise of care of self, may not only deny the relational character of bodies, it may also control and govern those very relations in the shape of “superbiopolitics” for our “superorganisms”. These futuristic visions might not be as dystopian as they seem considering recent findings about the inheritability of microbes. We inherit microbes’ deficiencies and diversities just like we inherit our genotypes.<sup>76</sup> It is also said that we release a particular microbial cloud that is distinct for each “individual.” For some scientists, these findings lead to such disturbingly short-sighted conclusions as easy invigilation: “individual personal microbial clouds clearly suggest a forensic application for indoor bioaerosols, for example to detect the past presence of a person in an indoor space.”<sup>77</sup>

Microbiome researchers tend to be unable to grasp the potential of their findings for the philosophical conceptualization of bodies, which may actually change legal and political practices and, consequently, our lives. The radical gap between philosophy and life science is compounded by the need and demand for ready-made applicability of new scientific findings onto existing practices. The inability to understand the dynamism of both thought and the materiality of bodies leads to a continuously expanding gap between those two spheres of multibodies. How can we not only practice, but construct ways of practicing multibodies that would allow for the open spaces that enable the further growth, mutation and flourishing of multibodies? In other words, how can we construct the conditions for practicing bodies within affect – practicing relations of contaminations for the multibodies that we are? We need to consider methods of actions that would be applicable and understandable not only for philosophical discourse, but also for a scientific one. In the next section, I will discuss the mechanism that drives multibodies and which itself can be considered to condition the unconditioned – the immunity of the multibody.

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<sup>76</sup> Eric C. Martens, “Microbiome: Fibre for the Future,” *Nature* 529, no. 7585 (14 January 2016): 158–59.

<sup>77</sup> James F. Meadow et al., “Humans Differ in Their Personal Microbial Cloud,” *PeerJ* 3 (2015): 17.

## 4.6 The Immunity of the Multibody

While medical researchers are focused on personalized medicine for the superorganism, in our concern with bodies, the body's dynamic and its multiple character, the microbial relationality triggers a new spark in terms of thinking beyond personhood and the mechanism of biopolitics that drives it. Having considered a different logic, mapped by Deleuze as difference or Karen Barad's understanding of methodologies of diffraction, we already have the tools to conceptualize the politics of multibodies. From the dissensus, understood by Rancière as "not a confrontation between interests or opinions [...] [but as] the demonstration (manifestation) of a gap in the sensible itself,"<sup>78</sup> we can think beyond the polarized politics of exclusion. The question is whether we dare to think with rather than against the microbiome?

Haraway has long claimed that understanding dissensus as a dynamic gap that is a performative feature of multibodies evokes the character of the immune system. Her writings became almost prophetic with the discovery that our immune system is a microbiome: "the immune system is an elaborate icon for principal system of symbolic and material "difference" in late capitalism."<sup>79</sup> She argues that there is a powerful and dynamic language of biomedicine that is never stable and yet it can shape the socio-politics of bodies and selves. The dynamism of biomedical language has the power to generate multiple understandings rather than representations of particular ideas and imagination:

The immune system is a historically specific terrain, where global and local politics; Nobel Prize-winning research; heteroglossic cultural productions, from popular dietary practices, feminist science fiction, religious imagery, and children's games, to photographic techniques and military strategic theory; clinical medical practice; venture capital investment strategies; world-changing developments in business and technology; and the deepest personal and collective experiences of embodiment, vulnerability, power, and mortality interact with an intensity matched perhaps only in the biopolitics of sex and reproduction.<sup>80</sup>

Such a wide and relational understanding of immunity, which crosses disciplines, bodies and times, has a material grounding in the complexity and relationality of the carnal body. "The immune system is everywhere and nowhere,"<sup>81</sup> Haraway notes. Its physical characteristics are that of an open system, which, although dynamic and mutable, functions in order

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<sup>78</sup> Jacques Rancière, *Dissensus: On Politics and Aesthetics*, trans. Steven Corcoran, (London/New York: Bloomsbury Academic, 2010), 38.

<sup>79</sup> Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature*, (New York: Routledge, 1990), 204.

<sup>80</sup> *Ibid.*, 204–5.

<sup>81</sup> *Ibid.*, 218.

to maintain coherence in the necessary ongoing relationality. As Haraway concludes, immunity is, in that sense, “shared specificity.” It is:

semi-permeable self able to engage with others (human and non-human, inner and outer), but always with finite consequences; of situated possibilities and impossibilities of individuation and identification; and of partial fusions and dangers. The problematic multiplicities of postmodern selves, so potently figured and repressed in the lumpy discourses of immunology, must be brought into other emerging Western and multi-cultural discourses on health, sickness, individuality, humanity, and death.<sup>82</sup>

Esposito, although inspired by Haraway’s argument that, through looking at immunity as a relational open system, we can change our understanding of self, signals the historical contradiction of that pursuit. Immunity, after all, carries a highly dialectical understanding of bodies. Common conceptualization of immunity system is based on the exclusion of the other, which it is necessary to be immune from. The relationship with the other that immunity is about is not based on distance, but rather on reciprocal determination and condition. It has “the dialectical figure [...] of exclusionary inclusion or exclusion by inclusion.”<sup>83</sup> Such a relation, inscribed in the understanding of immunity, is based on negation; it is driven by negation and succeeded by it.

How, then, would a relation that is not based on exclusion actually work? Esposito finds an answer by comparing the socio-political function of community with the biological understanding of immunity of a living body as discussed by Haraway. He asks, how can we adopt Haraway’s biological understanding of immunity into biopolitics while avoiding the most violent and military symbolism that immunity carries? How can we understand immunity that does not work for the centre, identity or community that it is designed to protect, but rather works for the non-personhood of the multibody? As Esposito points out, the biological understanding of immunity that emerged with the discovery of vaccines and medical bacteriology between the eighteenth and the nineteenth centuries is characterized by the sense of reaction. Immunity does not exist as its own force, but rather it presupposes “the ills” that it is about to fight or respond to.<sup>84</sup> Can we think about immunity in a non-dialectical way? Can we re-shift its negative management in a way that would remain political? As he argues: “The route to be taken can only pas through the same object that it intends to deconstruct; not by negating it, but rather by deepening the internal contradiction.”<sup>85</sup>

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<sup>82</sup> Ibid., 225.

<sup>83</sup> Esposito, *Immunitas*, 8.

<sup>84</sup> Ibid., 8.

<sup>85</sup> Ibid., 16.

Esposito sees the change in our understanding of the immune system not in the relation of negating the negation, but rather in affirming the negation, similar to Deleuze's understanding of waste, which affirms the forgetting. The difference, negation, and heterogeneity is what drives the immune system:

the immune system must be interpreted as an internal resonance chamber, like the diaphragm through which difference, as such, engages and traverses us. As we were saying: once its negative power has been removed, the immune is not the enemy of the common, but rather something more complex that implicates and stimulates the common.<sup>86</sup>

In other words, once we overcome the view of the body and self as a closed system, the notion of immunity changes its function. While within a biopolitical understanding of bodies everything accumulated within the boundaries of closed systems, the understanding of a much more relational and open character of bodies addresses the process of “technicization of life.”<sup>87</sup>

The body is no longer a philosophically given concept or a biologically given phenomenon. To reiterate Spinoza, we literally do not know what the body can do. The polarization of biopolitics, grounded in an immunity-community dialectical understanding, cannot be the method for grasping the explosive and dynamic character of the multibody. As Esposito argues, the old polarization of outside-inside, in which understanding the human and self required protecting it from outside, has shifted. Now, with research on the non-pathogenic role of microbiome, we have realised how the outside penetrates the inside at the ontological level, rendering the inside-outside distinction meaningless. The multispecies bodies establish a multi-layered, bio-socio-historical ecosystem within which the constant encounter and contamination with each other guarantees the formation of ‘self’. The immunity of the body that is already multiple thus becomes its relationality and capacity for transformation. In other words, we can now say that affect is the body's immunity: “this is an interaction between species, or even between the organic world and the artificial world, implying a veritable interruption of biological evolution by natural selection and its inscription into a different system of meaning.”<sup>88</sup>

The actual methods of practicing the multibodies include creating relational spaces that have a particular character – they must allow the collective assemblage of the multibody to continue to mutate, to continue to grow and to transform – and that continue to contaminate. In practice, the approach that results from affect combined with the logic of impersonhood would mean implementing the logic of immunity. The immunity of the multibody requires us to keep adding relations while caring for the multibody's capacity to continue to multiply.

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<sup>86</sup> *Ibid.*, 18.

<sup>87</sup> *Ibid.*, 147.

<sup>88</sup> *Ibid.*, 148.

It is a difficult and brave method. It would involve, for instance, caring for the health of the body by multiplying s/he/it's many relationalities, rather than protecting it by any antiseptic means. Understanding how the immunity of the multibody may be practiced can be seen by examining how this tension between multiplicity and identity is present within the works of bioart.

Today, many bioartists directly tap into the layered materialities of microbiome. The imagination of that which is invisible to the naked eye became the most intriguing aspect of multispecies alliances for many artists. Often, however, in an affirmative approach that celebrates the admiration for our multiplicity, the works with bacteria exercise the radical processual openness and mutability of bodies. Julia Lohmann and her *Co-existence*, 2009 [Figure 23 a, b], which systematizes and classifies the bacteria of our body in Petri dishes, forming a complete portrait of the human body, seems to be a representation of multiplicity, an affirmation of its discovery, rather than its exercise. Although important for raising awareness about the multiple character of the body, the illustrative nature of the work cannot initiate the multibodies' practice. It seems insufficient to only represent the multiplicity, one should also think and create with the multiplicity.

Sonja Bäuml's work with bacteria, for example, is an ongoing practice of finding the new possibility of relationality with that which is imperceptible, but which constitutes our way of being. She persistently searches for new conditions of relations by securing spaces of bacterial growth, mutation and the appearance of multiplicity. In her work, she creates the space not only for the visualization of the bacteria, but for their growth. By securing the space for transformations, she makes tangible the encounter with the tension between the habits of self and the experience of multiplicity. Her *Expanded Self II*, 2015 [Figure 24], a project to grow your own bodily microbiome self – basically a huge petri dish filled with agar – onto which the artist imprinted her whole body – becomes a way of encountering the struggle to confront and live within multiplicity.

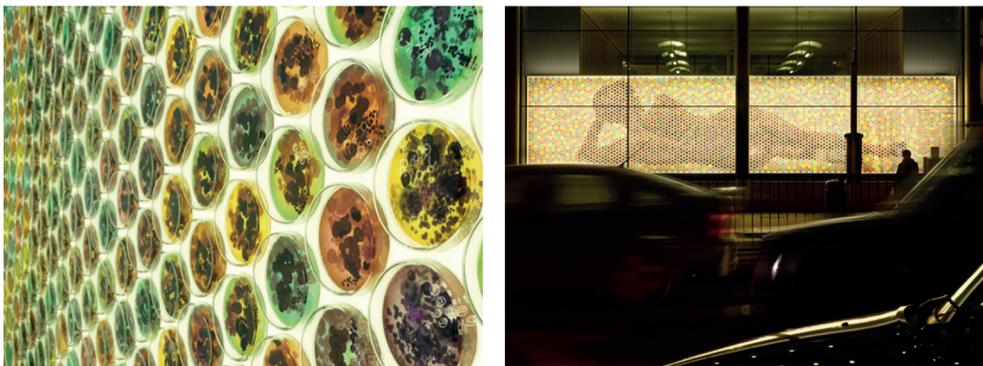


Figure 23 a, b. Julia Lohmann, *Co-existence*, 2009, <http://www.julialohmann.co.uk/work/gallery/co-existence-wellcome-trust/>, accessed 17 March 2017.



Figure 24. Sonja Bäümel, *Expanded Self II*, 2015, <http://www.sonjabaeumel.at/work/bacteria/expanded-self-2>, accessed 17 March 2017.

The fascination with the newly discovered symbiotic nature of bacteria and the relational character of our bodies has exploded into numerous artistic projects and designs for textiles, clothing, tools and furniture made from and with bacteria. A number of bioartists and biodesigners have produced a disturbing confirmation of the commodification of the premature readiness to apply newly discovered materialities. Some seem to perpetuate the old ideas and categories regarding life matter, i.e. that in order to be encountered, life must be commodified, turned into a sphere of understandable *bios*.

Projects such as *Biocouture* by Suzanne Lee [Figure 25] and Aniela Hoitink's *Mycelium Textile* [Figure 26], which use bacteria to literally grow garments, or Jalila Essaïdi's *Mestic* that transforms manure into materials such as plastic, textile and paper<sup>89</sup> showcase a new generation of artists and designers that are already working with an understanding of the relational character of bodies, of how bodies' sustainability is grounded in an ongoing need for new alliances and transformations. Nevertheless, while expanding and generating new material relations in their approach to bodies, such projects might also prompt a new industry of commodified species. Rather than becoming our companions, microbiome may be granted the status of low-cost labourers.

Multibodies demand the creation of relations of tensions and of an open system of stimulations. Importantly, following the method of non-dialectical immunity, those relations must be of a particular kind. They cannot destroy the s/he/it multiplicity, but rather, through multiplication and openness to new relations, they must enable further multiplication, transformation and mutation. The creations of spaces of tension, while enabling further transformations, is the immunity method of multibodies politics – microbiopolitics.

<sup>89</sup> Jalila Essaïdi, *Mestic*®, <http://jalilaessaïdi.com/cowmanure/>, accessed 10 July 2017.



Figure 25. Suzanne Lee, *Biocouture*, 2012-, <https://www.dezeen.com/2014/02/12/movie-biocouture-microbes-clothing-wearable-futures/>, accessed 17 March 2017.



Figure 26. Aniela Hoitink, *Mycelium Textile*, 2016-, <http://neffa.nl/portfolio/mycotex/>, accessed 17 March 2017.

## 4.7 *Contaminant A* like the Agency of Microbiome Security

This is not a project about dystopian tomorrow.  
The MSA is interested creating options in the world.<sup>90</sup>



Figure 27. The Microbiome Security Agency, 2015, <http://welcometothemsa.com/>, accessed 17 March 2017.

Instead of following the logic of exclusion, which fosters the fear of losing the autonomy, control and mastery of the body with the conviction that, without biopolitics we will enter a total chaos of dehumanization, the *Microbiome Security Agency* (MSA), 2015 [Figure 27] project affirms the multiplicity by multiplying the encounters. “We’re interested in a proactive approach to creating a future we want to inhabit by creating options to work with in a complex world filled with unknowns and promise.”<sup>91</sup> MSA formulates its practice in the context of ongoing research on microbiome, such as that of HMP, where the extent of the mutually symbolic nature of microbiome and “our” body is such that it is impossible to distinguish or separate them. MSA’s work is thus a direct response to the scientific findings, albeit in a unique, non-dialectical way. They do not negate or criticize, but rather expose the multiplicity by multiplication and transformation itself.

The MSA imagines ways of creating paths of responsibilities with regard to the multiplicities that we find ourselves embedded with. Although the name of the group might indicate some form of security action that has a military and dialectical character, the actual

<sup>90</sup> Emma Dorothy Conley, *Bio Art & Design Awards*, <http://www.badaward.nl/tag/emma-dorothy-conley/>, accessed 19 May 2016.

<sup>91</sup> *Ibid.*

practice is quite different. Rather than keeping laws and old categories that express the historical role of immunity, MSA creates ways of acting within an open system. They use methods driven by the non-dialectic logic of immunity. They explore three possibilities that might be applied when working with the microbiome, but one method seems to be the most appealing. Imagine that instead of the antiseptic trends that have dominated our biopolitically governed cultures, we obscured the convenient borders with an omnipresent multiplication.

MSA's experiments involve three ways of investigating microbiome:

1. TRACKING the changes of the skin microbiome over time.
2. DESTROYING the DNA of bacteria in faecal samples using household products.
3. OBSCURING the skin microbiome by creating an "Obscuration Solution" from a diverse selection of bacteria.<sup>92</sup>

The first, tracking experiment works on the presupposition of identity. The consideration that once you know what to look for, you can point it out, distinguish it and extract it. The second experiment is about the most effective ways to destroy particular bodies. In the catalogue that accompanies the project, the group provides diagrams detailing the amounts and intensities of treatments for each body and the results of each destruction. Nevertheless, only the third experiment, "obscuring", seems to respond to the actual character of the multiplicity of microbiome and our mutual relationality.

Rather than struggling to identify bacteria in order to destroy them using the most common antiseptic products, such as acetone or alcohol, we can work with them. Thus, the MSA proposes a process of anonymization:

The bacteria in and on our bodies is useful and necessary for many health reasons. Therefore, it is better to obscure it than to destroy it. In addition, we found that DIY destruction of bacteria in faecal samples proved less effective than we predicted. In this experiment we aimed to create an "obscuration solution" that would anonymize the bacteria on your skin by essentially adding noise.<sup>93</sup>

The process to obscure the data involved collecting bodies known to be rich in bacteria, such as faeces, kefir, époisses cheese, kombucha, and soil. All these bodies were then blended together and, from this multibody, the DNA mixture was "extracted, amplified, and then added to mediums to be applied to the skin."<sup>94</sup> Whether such an obscuration works when applied to the skin is still being researched. Yet, as the MSA argues, the more bodies in

<sup>92</sup> MSA, exhibition catalogue, *Bio Art & Design Awards*, 2015, 42.

<sup>93</sup> MSA exhibition catalogue, 52

<sup>94</sup> *Ibid.*

the mixture, the more likely the effect of obscuration. Instead of destroying and keeping clean what is given, conforming with what Paxson described as a “pasteurian culture” that is dominated by antiseptic politics,<sup>95</sup> MSA introduces noise. They multiply according to anonymity, or better, non-personhood. We are not disappearing, but only multiplying our non-personhood, our s/he/it, rendering the very sense of identity meaningless [Figure 28 a, b].

The scattering of self to the point of anonymity, the protection of anonymity to the point of obscuration and scattering, proposed by the MSA project, becomes a method of resistance. This resistance is not a dialectic that makes one “stand opposed to the order of things, but simultaneously avoids the risk involved with trying to overturn that order,”<sup>96</sup> as Rancière describes it. Rather, MSA’s notion of resistance actualizes Braidotti’s nomad – resistance generated from within the system. MSA performs an obscuration for the sake of protecting difference, sustaining the messiness and noisiness of multibodies:

In ecosystems, there are always winners and losers. There are always negotiations and exchanges of power. As we understand our human bodies as a multi-species, yes we will need to adapt our human politics to encompass our multi-species selves, and not just our individual selves. But more importantly, I hope the 21<sup>st</sup> century marks a paradigm shift in the way we consider “the self”: I hope we start to understand that we, as humans, are part of (and not somehow outside of) the ecosystems that we contribute to and that support and sustain our lives.<sup>97</sup>

In this way, MSA creates ways of practicing microbiopolitics for multibodies. Without dialectical negation and within the system of multiple relations, they create spaces of continuous tension.

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<sup>95</sup> Heather Paxson, “Microbiopolitics,” in *The Multispecies Salon*, ed. Eben Kirksey, (Durham, NC: Duke University Press Books, 2014), 115-121.

<sup>96</sup> Rancière, *Dissensus*, 177.

<sup>97</sup> Personal communication with the MSA artist Emma Dorothy Conley, 13 July 2016.

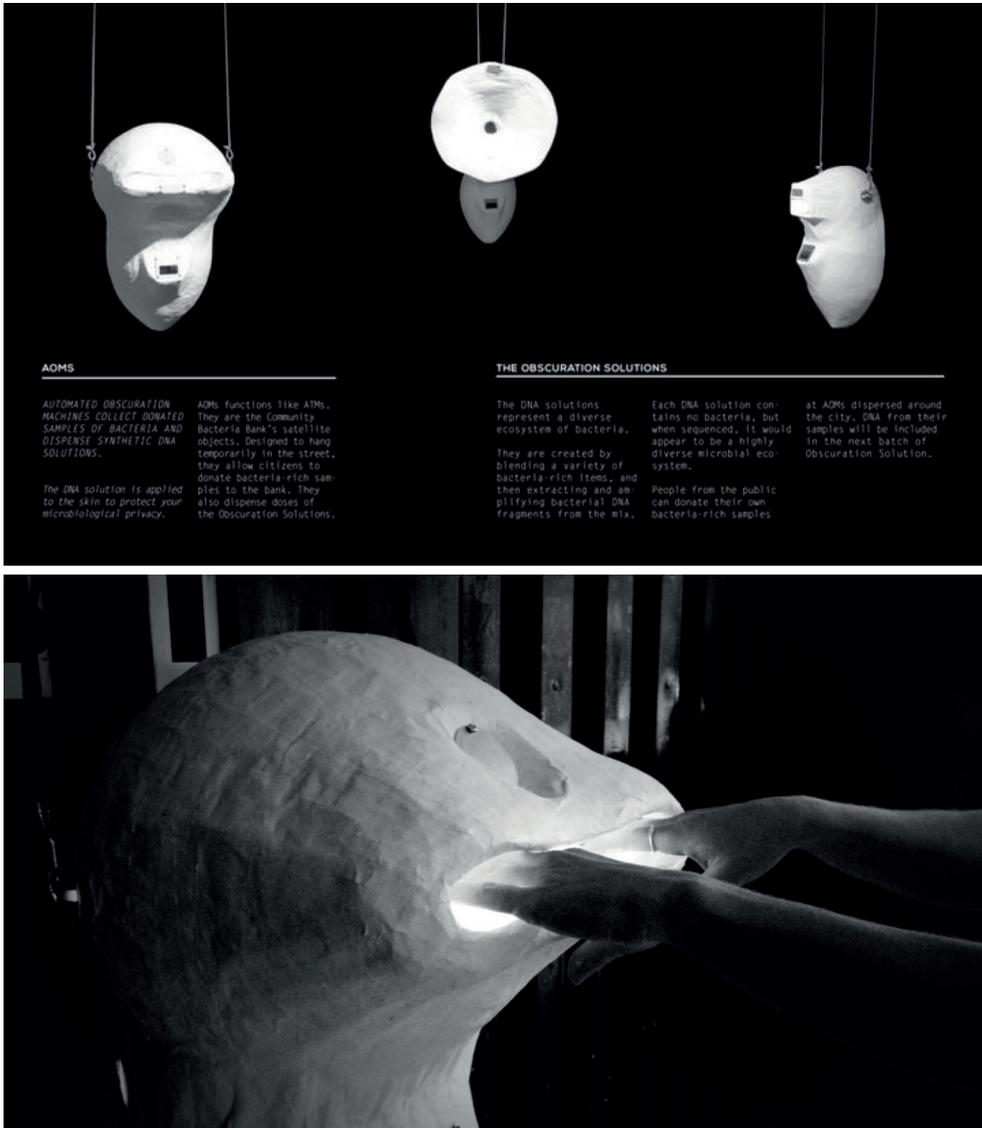


Figure 28 a, b. The Microbiome Security Agency, AOMS - *Automated Obscuration Machines*, 2015, <http://welcometothemsa.com/>, accessed 17 March 2017.

## 4.8 Agonistic Microbiopolitics

In order to exercise the lack of given boundaries, in order to resist the logic of negation, but also to simply affirm the negation of negation, a different logic of practice of multibodies is necessary. Rather than operating within dialectic and binary structures, we can simply make the multibody excessive. It requires the affirmation of differentiation itself, the multiplication of differentiation and intensities it produces. Simple, yet dynamic and continuous multiplication might be the new model of immunity that affect implies. Immunity as the multiplication of encounters, where we add, not in order to destroy what is there, but rather continuing adding to the point of creating a strength by alliance with difference. This is the logic of acceleration that Deleuze and Guattari introduced when thinking beyond advanced capitalism.<sup>98</sup> The acceleration of difference, which rather than producing new identities, transforms them into anonymity. In this way, such an acceleration would sustain transformation by inducing change and creating a resistance to the logics of identity.

The multibody of us, of multispecies alliances that generate our bodies, prove to foster not only conceptual imagination and ethical and political urgency, but a reality that is gradually proliferating new bodies and discourses. Through MSA's production of affects, the artists generate new relations and encounters in a way that, rather than adjusting to old categories, modulate and transform these categories. The MSA induces and sustains contaminations to the point that what was, can no longer be traced. In this way, through their problematization, situating the multibody in actual material practices, we can now outline what living with multiple might be – what the conceptual premises and material realities of the microbiopolitics of multibodies living within affect are.

The character of this microbiopolitics, exercised in the work of MSA, has the dynamic and open character of relationality that affect implies. It is reminiscent of the politics described by Chantal Mouffe as agonistic spaces. For Mouffe, affect can be used to overcome politics based on a dialectical sense of relation, on identity and rationalism as the only means of constructing society. Like Protevi, she calls for embedding the relation and encounter in politics. I argue, however, that her affective understanding of how politics should function is even more consequent for the understanding of affect when taking into account the MSA's practice of microbiopolitics.

Like Esposito, Mouffe's understanding of community goes against the logic of consensus that works on a belief in a rational agreement between seemingly opposing parties. The politics of consensus, which for her constitutes a threat to democracy, privileges a reason

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<sup>98</sup> "But which is the revolutionary path? Is there one? – To withdraw from the world market, as Samir Amin advises Third World countries to do, in a curious revival of the fascist "economic solution"? Or might it be to go in the opposite direction? To go still further, that is, in the movement of the market, of decoding and deterritorialization? For perhaps the flows are not yet deterritorialized enough, not decoded enough, from the viewpoint of a theory and a practice of a highly schizophrenic character. Not to withdraw from the process, but to go further, to "accelerate the process," as Nietzsche put it: in this matter, the truth is that we haven't seen anything yet." Gilles Deleuze and Félix Guattari, *Anti-Oedipus*, 1<sup>st</sup> edition (London: Bloomsbury Academic, 2015), 275–76.

and priority of agreement based on a sense of identity. It simultaneously strengthens the non-rationalistic, emotional and *ressentiment* values that drive the need for given identity. As such, politics based on consensus fosters movements based on affections, which disregard everything that does not fit into the logic of “we,” into that which is already given. Similar to Braidotti’s nomadic theory, which pleads for a relocation of the centre in order to diminish the unitary vision,<sup>99</sup> Mouffe describes the act of prioritizing the centre as extremism. The privilege of centre that drives consensus politics, where rational subjects blur any antagonisms, becomes the perfect feed for the politics of resentment. Instead of actively mobilizing by shaping new identities, these movements of affections (based on affection alone) actually strengthen those that are old and given:

By limiting themselves to calls for reason, moderation and consensus, many democratic parties are showing their lack of understanding of the functioning of political logic. They do not understand the need to counter their adversaries by mobilizing affects and passions in a progressive direction. What they do not realize is that a democratic politics needs to have a real purchase on people’s desires and fantasies and that, instead of opposing interests to sentiments and reason to passions, it should offer principles of identification which represent a real challenge to the ones promoted by the right.<sup>100</sup>

By diminishing any role for passion – affects that originate outside of our bodies – in the political process, we construct a false understanding of politics based on a singular, unified image. By implementing the mechanism of affect as “moving forces of human conduct”<sup>101</sup> in politics, we implement the multiplicity of encounters. This understanding of the politics of affect is based on dynamism and temporary alliances (rather than on consensus) that would sustain transformations.

Depending on how affect is implemented, politics can take the shape of democratic pluralism. Rather than seeking to falsely diminish the hostility and tension that affect embodies, by subsuming everything into the “we,” democratic pluralism works based on the inscribed dynamic relationality. In such democratic pluralism, or what Braidotti calls *bios/zoë* egalitarianism, the existence of “we” depends on continuous encounters with the “outside”. In other words, the aim is not to overcome the antagonism and differences of affect with universalization and identification, but to transform it into what Mouffe calls agonism, and what we can now see as close to an open understanding of immunity as described by Haraway and Esposito.

Importantly, like the open sense of immunity, agonism should not be understood in the dialectical way, as the practices directed towards overcoming that which is opposite.

<sup>99</sup> “Having rejected the model of liberal individualism, in the form of a nonunitary and vitalist vision of the subject, nomadic theory does not enhance multiculturalism, which positions “others” as minorities to be tolerated at best. The emphasis falls instead on the necessity to relocate the center—the dominant subject position—in a process of becoming-minoritarian that also repositions the center-margin relationship. A becoming-minor of Europe.” Braidotti, *Nomadic Theory*, chapter 9: “Nomadic European Citizenship.”

<sup>100</sup> Chantal Mouffe, “Politics and Passions: The Stakes of Democracy,” *Ethical Perspectives* 7, no. 2–3 (2000): 148.

<sup>101</sup> Chantal Mouffe, *The Return of the Political*, revised edition (London/New York: Verso, 2006), 140.

Rather, Mouffe calls for maintaining the state of tension without pursuing its resolution. Each overcoming of tension is, for her, the construction of hegemony, which, despite its claim for priority on the basis of rational consensus, is always temporary and unstable. What is thus stable, what becomes the same, appears to be the constant flow of difference as tension, the flow of intensity as encounters – of affects.

For this reason, namely the necessity of affective politics, for Mouffe, art's practice already becomes a possibility for realizing the agonistic spaces of her pluralistic democracy. In step with Deleuze and Guattari, she defines art as producing affects and percepts that make art immediately political.<sup>102</sup> Art can, of course, fall into a capitalist machine, the possible effects of which we have seen in the previous section when discussing the representational approach to multibodies of the microbiome. A way out of the neutralization by capitalism is art's affective power; that, rather than perpetuating the ideas of the present hegemony, that is the present practice of sustaining the habits of identification, transforms and speculates on the new one, thus introducing spaces of tension and contaminations within encounters.

Mouffe sees a total resistance to capitalism in art's initiations of encounters, or what she calls, agonistic spaces. Such resistance, rather than taking the form of a more radical critique, that would, after all, only perpetuate the dialectic mechanism already embedded in the capitalist machine, works on the level of multiplication of intervention: "What is needed is widening the field of artistic intervention, by intervening directly in a multiplicity of social spaces in order to oppose the program of total social mobilization of capitalism."<sup>103</sup> Importantly, such multiplication of spaces is not driven by the logic of looking for the common. As exercised in the work of MSA, multiplication is rather about initiating the chaos of encounters, to multiply that which can never be subsumed within the logic of identity.

In this way, as Mouffe argues: "the prime task of democratic politics is not to eliminate passions or to relegate them to the private sphere in order to establish a rational consensus in the public sphere. Rather, it is to 'tame' those passions by mobilizing them towards democratic designs."<sup>104</sup> Although she uses the word "tame" when writing about the role of passion, evocative of Descartes' understanding of the necessity to control and govern passion, her explanation reveals the dynamism of her project. Mouffe wants to embed the dynamic and risky relationality that passions embody in politics. Rather than establishing consensus, in other words, rather than aiming at harmonious agreement, which, despite its claims, still works on the basis of exclusion, she calls for maintaining the very sense of encounter: "In a democratic polity, conflicts and confrontations, far from being signs of imperfection, are the guarantee that democracy is alive and inhabited by pluralism."<sup>105</sup>

<sup>102</sup> See Chantal Mouffe's lecture given at *Staging Democracy, De Balie, Amsterdam, The Netherlands, 3 June 2016*, [http://www.debalie.nl/agenda/podium/staging-democracy/e\\_9782252/p\\_11766021/](http://www.debalie.nl/agenda/podium/staging-democracy/e_9782252/p_11766021/), accessed 27 June 2016.

<sup>103</sup> Chantal Mouffe, "Artistic Activism and Agonistic Spaces," *ART&RESEARCH A Journal of Ideas, Contexts and Methods* 1, no. 2 (2007): 1.

<sup>104</sup> Chantal Mouffe, "Politics and Passions: The Stakes of Democracy," 149.

<sup>105</sup> *Ibid.*, 149.

Yet, considering the work of MSA, which embeds its practice of multiplication of encounters as a means to resist the hegemony of our Pasteurian, antiseptic society, it seems that such microbiopolitics is only possible through art's practice. Can we think and practice the microbiopolitics of our multibodies outside art? Is art the only space where agonistic encounters are still possible?

What the contaminants of *Layer Cake* and of MSA have taught us is the necessity of constructing spaces of tension, of combining affect with impersonal logic, if we want to come close to the understanding and practice of multibodies that affect implies. Most crucially, however, what the discussed artistic contaminants of multibodies have been practicing is not only the need to change the practice, but also to change the logic behind that practice. What these two contaminants share and what is crucial in our analysis is their ways of practicing bodies within affect – through speculation, fabulation and the creation of spaces of tension driven by the logic of immunity.

Speculation is not a futurism of the impossible, but rather a multiplication, an acceleration of the possible, of connecting that which has not yet been connected and what might be. Such a speculative approach presupposes the porosity of bodies and their readiness to be affected, to encounter at any point, in any way, purely for the purpose of experimentation: to find what the body can do in a way that does not destroy s/he/it. Such a speculative approach calls for an ethical stand – for infectious ethics – for the ethics of contamination.



## Chapter 5

# The Ethics of Contamination

Whether or not art is allowed to play with life it's been a big question in my art, and I think I am trying to bring it into some other level of experience than just what can I learn from this - that's repeatable, that is one piece of a puzzle that proves the elegance of the universe. And instead, I might prove that chaos exists and feelings are important and life is strange, you know, permanently.<sup>1</sup>

### 5.1 Contaminant V like a Vastal<sup>2</sup>

My first encounter with the work of Adam Zaretsky was at Leiden University in 2011, when he gave a lecture during a course on “Ecocriticism and Bioart” led by Robert Zwijnenberg and Isabel Hoving. I was expecting yet another artist’s portfolio presentation with undoubtedly inspiring concepts and approaches. “It will be a nice, relaxing lecture, just listen and enjoy,” I recall thinking. Only those readers who have met Adam will know how wrong I was. It was a regular class, with over twenty students staring at the teacher’s desk, behind which the Dionysian persona of Zaretsky is talking about “Appropriate Pervert Technology” and “Post-sustainable Orgy, as Our Only Hope.” While demonstrating the naivety of the transhumanist belief in enhancement and arguing for the introduction of biotechnology into what he described as “radical difference,” on the board behind him, Zaretsky was screening images of human and non-human pornography, fetishisms, mutations and technological bio-transgressions. I remember that my thoughts were exploding with ideas during his lecture. I was agitated, excited that, finally, someone was touching upon the weird, uncomfortable, moving, contaminating and messy materiality. Undoubtedly, Zaretsky’s shock therapy, designed to wake up the senses, had worked on me. It was trashy and noisy – everything you would not expect from an academic lecture. I discovered a similar logic,

<sup>1</sup> Fragment transcript from Adam Zaretsky, *DIY Embryology*, 2012, <https://vimeo.com/51410231>, accessed 16 March 2017

<sup>2</sup> Vastal stands for *The VivoArts School for Transgenic Aesthetics Ltd.*, it was formed in 2009 by Adam Zaretsky. For further description and details see Zaretsky, “VASTAL: The Vivoarts School for Transgenic Aesthetics, Ltd.” (ProQuest Dissertations Publishing, 2012), <http://search.proquest.com/docview/1220674667/>, accessed 17 March 2017.

driven by the “messy, trashy and noisy”, in 2013, in the exhibition “Yes Naturally” in The Hague, the Netherlands, where Zaretsky presented his work *Errorarium* [Figure 29].



**Figure 29.** Adam Zaretsky, *Errorarium*, 2012, exhibited at “Yes Naturally”, The Hague, The Netherlands, 2013, <http://ja-natuurlijk.com/site2/category/kunstenaars-en/>, accessed 17 March 2017.

The work *Errorarium* was a part of the research “BioSolar Cells” in the Netherlands<sup>1</sup> – a program that focuses on establishing a sustainable source of energy by extracting chlorophyll<sup>2</sup> from organisms, such as plants, algae and some bacteria, which are capable of photosynthesis (the process of converting solar energy into chemical energy<sup>3</sup>) and implanting it into other organisms, such as zebrafish embryos. *Errorarium* was a machine that was built in order to contain and further stimulate the new solar organisms that Zaretsky called – “biosollar mutants.”<sup>4</sup> Since the activity of these new organisms depends on environmental conditions, such as the availability of water, nutrients, temperature and light, the idea behind the work was that by manipulating the conditions in which the plants live, the visitor could influence the expression of the plant’s genes, hands-on. By playing with the knobs of the machine, the

<sup>1</sup> “Home – BiosolarCells,” <http://www.biosolarcells.nl/en/home.html>, accessed 9 February 2017.

<sup>2</sup> “The green pigment in plants that functions in photosynthesis by absorbing radiant energy from the Sun” “Chlorophyll - Oxford Reference,” <http://www.oxfordreference.com/view/10.1093/acref/9780199600571.001.0001/acref-9780199600571-e-1406>, accessed 23 June 2017.

<sup>3</sup> “Photosynthesis – BiosolarCells,” <http://www.biosolarcells.nl/en/zonne-energie/fotosynthese.html>, accessed 23 June 2017.

<sup>4</sup> Adam Zaretsky, “From the Desk of Adam Zaretsky, Ph.D.,” <http://docplayer.nl/663342-From-the-desk-of-adam-zaretsky-ph-d.html>, accessed 9 November 2016.

visitor could change light and sound, altering the environment of the growing organism inside the machine [Figure 30]. In this way, unlike a scientific experiment, which, in order to be epistemologically valid, must be conducted under strict protocols and precision, the way of engagement proposed by Zaretsky was affectively singular, unrepeatable and contingent:

By changing the variables on the Errorarium, you are making the experiment non-repeatable and hard to utilize. At the same time, you are finding variables that are beyond the scope of known research. Therefore, the Errorarium produces a wide range of chaotic artificial light and sound results by maximizing jazz variability within the artistic growth chamber.<sup>5</sup>



Figure 30. Adam Zaretsky with his *Errorarium*, 2013, <http://ja-natuurlijk.com/site2/adam-zaretsky/>, accessed 9 February 2017.

From Latin, the word ‘error’ denotes “the action of roaming or wandering; hence a devious or winding course, a roving, winding.”<sup>6</sup> As a deviation from accuracy, it also means a mistake, transgression, trespass, fault and wrong-doing.<sup>7</sup> The explicitness of Zaretsky’s use

<sup>5</sup> Ibid.

<sup>6</sup> “Error, N.,” *OED Online* (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/64126?>, accessed 9 November 2016.

<sup>7</sup> Ibid.

of that word to name a tool of mutation is strengthened by the Latin suffix *-arium*, which denotes “thing connected with or employed in, place for.”<sup>8</sup> Through this etymological analysis, *Errorarium* can be understood as a location, a space of wandering deviations. However, not only the name of the work evokes a space of tension and contamination.

The machine is reminiscent of an old, coin-operated game machine, with the same kinds of sounds and flashing lights as those from the 80s and 90s. Through the style of the past, Zaretsky lures spectators into a seemingly innocent experience of the future present. Any moral concern that might be raised by the manipulation of actual living organisms rather than inorganic matter is diminished by the policies of the gallery space where you are invited to touch and play. In this way, Zaretsky creates a space where our sensitivity and responsibility are literally tested and confronted with the desire and curiosity to encounter, to engage in play. In his work, the question of ethics is inseparable from the question of creativity and production, but also the desire to control and manipulate. He asks: “Do you think you are enriching or stressing the organism in the *Errorarium* with your mediated entertainment? Why do you believe this?”<sup>9</sup>

However, I will argue that the playfulness of manipulation, under the cover of sustainability and scientific innovation, raises a much more profound question. In his work, Zaretsky produces a new shape for ethics, a new understanding of how to live within the encounters of contamination. The “BioSolar Cells”<sup>10</sup> research belief in a better future, due to improved and sustainable energy consumption, where mutating bodies are to be governed for profit and human benefit, is questioned by the artist. This distortion in the trust in sustainability can be noticed in the design of the arcade machine itself. The side walls of the machine feature images of cosmonauts in the space [Figure 31], uncannily reminiscent of Stanley Kubrick’s *2001: A Space Odyssey*, a movie in which a human invention of a sentient algorithm in a spaceship, designed to serve people, ends up killing humans in order to protect itself. Is this a cautionary tale? Zaretsky seems to ask: Are we ready for these mutants and have we truly thought through all the implications of living with mutants? As he writes:

Do the organisms we are tweaking have an advantage that might make them capable of major disruption of imperilled habitats? Are these mega sun energy harvesters capable of more disruption of the dynamic equilibrium

<sup>8</sup> “Arium, Suffix,” *OED Online* (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/10794>, accessed 9 November 2016.

<sup>9</sup> Adam Zaretsky, *BioSolar Cells: Making a Field for Interpretation Two Year Report and Proposal for Future Research*, ‘From the Desk of Adam Zaretsky, Ph.D.’, <http://docplayer.nl/663342-From-the-desk-of-adam-zaretsky-ph-d.html>, accessed 9 November 2016.

<sup>10</sup> “The world population is growing and increasing numbers of people aspire to higher standards of living: we need more and more energy and food. We can only do this by producing energy and food in a sustainable way, which means creating less waste and lowering CO2 emissions. The sun is a source of energy that fulfils these conditions.” See more on <http://www.biosolarcells.nl/en/zonne-energie/waarom-is-duurzame-zonne-energie-nodig/>, accessed 9 November 2017.

of planetary diversity than the energy benefits that they may provide? Are we making monsters for short-term competitive excellence or is the offset of carbon credits shoring up travesty and more anthropogenic alienation in the form of life itself?<sup>11</sup>



Figure 31. *Errorarium* presented at the *The Hortus botanicus Leiden*, 2012, <https://plantenolympiade2012.wordpress.com/>, accessed 17 March 2017.

Through *Errorarium*, Zaretsky created spaces of tension as a tool for asking these questions, as a way of encountering these multiple concerns, ways of life and desires. When we do not need to reach an agreement according to a given telos of what it means to improve, to sustain and to make decision about who deserves to live, we can focus on a different set of questions and problems. Instead of inquiring about what is, we can experiment with what bodies that are, may become. We can focus on processes of experimentation that might be disagreeable, which may destroy you or change you. The radically contingent meetings that are not preceded by the given categories and values become Zaretsky's ethics of contaminations, ways of being with the future present mutants.

<sup>11</sup> Zaretsky, "From the Desk of Adam Zaretsky, Ph.D."

## 5.2 The Time of Matters of Affect

Zaretsky's works and performances are embedded within the reciprocal entanglement of aesthetics, ontology and ethics. In his practice, he seems to enact Guattari's "new aesthetic paradigm," that actualizes "ethico-political implications."<sup>12</sup> As Guattari writes, "to speak of creation is to speak of responsibility of the creative instance with regards to the thing created."<sup>13</sup> This new aesthetic paradigm, which Zaretsky calls "transgenicaesthetics," involves acknowledging and sustaining the lack of any given logic of appropriateness, and the correspondence of practice with the presupposed model or imperative. His workshops, experiments and practices in the lab do not follow strict rules, scientific protocols, or that which can be considered social habits, norms and power relations. Instead, Zaretsky seems to create, to use Guattari's words, a "new taste for life,"<sup>14</sup> which emanates from the processual transformations of new bodies, their new subjectivities and ways of living. Zaretsky brings the future into the present in his work. He actualizes the impossible, exposing not matters of fact, but rather, what I call, contaminating matters of affect.

These matters of affect are thus not a utopian pursuit for omnipresent relationality, an uncritical embracing of emotions, contented feelings of agreements and consensus. As discussed in the previous chapters, these are difficult encounters, risky relations and collective transformations. Donna Haraway calls such matters of affect "staying with the trouble."<sup>15</sup> Matters of affect are contaminations that call for the production and sustenance of tension, rather than urging for its antiseptic resolution. We need to formulate the problems that must be considered, the tensions that need to be cared for rather than taken care of. However, it seems that, particularly through art, we can encounter, test and actively generate those encounters of transformations. In other words, scholars still have to learn what, for art, is a "natural" habitual way of becoming. This is what Deleuze and Guattari called the production of affects and percepts, the preservation of encounters of transformation that are unique and unrepeatable by other bodies.

We need new ways of thinking about relations of contamination, where the creation of new relational concepts and practices is not only allowed, but prompted. Affect, as I have been arguing in this book, may become such a condition of relational practice. Importantly, as a condition, in order to work-with rather than work-against, it cannot work according to any fixed method and closed system of rules. As I have demonstrated, affect has significant implications for the way we think and practice our bodies, how we understand how the meaning of bodies is produced and what the political consequences of such a relational and material understanding of bodies are. None of the implications of contaminating

<sup>12</sup> Felix Guattari, *Chaosmosis: An Ethico-Aesthetic Paradigm*, trans. Julian Pefanis (Bloomington, IN: Indiana University Press, 1995), 107.

<sup>13</sup> *Ibid.*, 107.

<sup>14</sup> *Ibid.*, 92.

<sup>15</sup> Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press Books, 2016).

matters of affect are stable and intrinsic. The logic of contamination that affect implies is driven by tension and transformation. When this transformation is applied to traditional categorization and systematization, affect may become fixed into affection, constituting a powerful tool for the logic of signification. In the previous chapters, I discussed Mouffe's warning that passions, when driven by the logic of emotions (affection), only strengthen and empower the regimes of identity – affect, rather than being affectus, becomes a fixed state of affection.<sup>16</sup> Hence, affect becomes a powerful phenomenon. It can create bodies and multiply their relations, but, because of its relational and transformative character, it can also serve as a tool of management, control and destruction through fixation and universalization.

This different logic of affect is not a simple application of relation based on tension. Rather, it requires an experimental and relational thinking driven by the acknowledgment of the material notion of meaning and understanding of the collective and open agency that directly influences body politics. In other words, affect as a condition of thinking practice and practicing thought forces and allows us to shape onto-epistemological parallelism. Affect 'shows' that gathering knowledge about bodies is inseparable from the way these bodies are and how we practice them.

Inevitably, ethical questions arise as a result of contamination and the dynamic character of knowledge-making practices and the becoming of our bodies within these practices. If not only the way I practice the body's affects, bodies' relationality, but also the way I understand them changes those very bodies, should I be held responsible for them? If I, as a multibody, am not autonomous from the onto-epistemological processes of bodies, but rather become a participant and co-agent of those processes, who is responsible for a multibody's actions or lack of them?

These are highly ethical and pragmatic questions that have been raised in each previous chapter. In this way, I have indicated the parallelism of ontology, epistemology and ethics – that the knowledge about bodies, their practice and becomings are inseparable. Affect as a condition of relational thinking and practice thus demands a rethinking of the ethics that are equally dynamic, relational and processual as our bodies are. Such ethics will have to respond to the agonistic spaces within which bodies are produced, and to relations of tensions that affect implies. Finally, ethics will have to parallel the microbiopolitics of the multibodies that we are. Reminiscent of Haraway's infectious ethics, I call this the ethics of contamination.

Ethics based on sustaining tension means creating agonistic contaminating spaces without the necessity for consensus, but also, without the trauma of encounter as an abuse of power. This is a tension that produces and disrupts, not in order to destroy what is, but rather to create what is not yet – that which is yet to come.

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<sup>16</sup> See Chapter 2 of this book.

### 5.3 Responsibility in Times of Affect

Haraway's famous call for practicing "response-ability" grows more urgent every day. Response-ability, she explains, should not, however, be understood as a call for a simple act of response to what is there:

Response-ability is not something that you just respond to, as if it's there already. Rather, it's the cultivation of the capacity of response in the context of living and dying in worlds for which one is for, with others. So I think of response-ability as irreducibly collective and to-be-made. In some really deep ways, that which is not yet, but may yet be. It is a kind of luring, desiring, making-with.<sup>17</sup>

In this way, I argue that Haraway indicates what practicing bodies within affect may imply. Although we are all already response-able, our bodies are full of multiple capacities and our understanding of bodies is generated by these capacities; the problem is that we do not know in advance what these capacities do. The challenge and urgency is thus to create spaces where the implications of these capacities may be encountered. In this way, I will argue that response-ability must be confronted with responsibility – the implications and consequences of our actions.

Making-with, production and creation can be easily consumed by the machine of consensus fuelled by capitalism, as Philippe Pignarre and Isabelle Stengers argue. Simple acceleration of production, collective making that does not involve any encounters with their consequences and verification, can only fuel and strengthen existing categories, division and hierarchical structures. Creation that transforms rather than neutralizes involves encountering and learning the consequences in the onto-epistemo-ethical dimension:

Not to 'interpret' but to transform doesn't signify that everything is good from the moment that it activates transformation, but that the truth of an idea or of a definition or of a hypothesis is nothing other than their verification, that is to say, the way in which they can produce consequences that orientate action.<sup>18</sup>

Importantly, this responsibility enables new encounters and, therefore, have a different dynamic than any moral imperative.

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<sup>17</sup> Donna Haraway in conversation with Martha Kenney, "Anthropocene, Capitalocene, Chthulhocene," in *Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environments and Epistemologies*, (eds) Heather Davis and Etienne Turpin, (London: Open Humanities Press, 2014), 257.

<sup>18</sup> Philippe Pignarre and Isabelle Stengers, *Capitalist Sorcery: Breaking the Spell*, trans. Andrew Goffey (Houndmills/New York: Palgrave Macmillan, 2011), 17.

In *What is Philosophy*, Deleuze and Guattari emphasized a way of thinking about responsibility that shifts the relations of power that the concept of responsibility itself implies. The word “responsibility” denotes “Capability of fulfilling an obligation or duty; the quality of being reliable or trustworthy,” but also “The state or fact of being accountable; liability, accountability for something.”<sup>19</sup> As such, responsibility is inscribed in the moral structures and values designating the systems of laws and rights. Instead of talking in terms of “responsibility for something”, which immediately attributes selected bodies with power and others with less power, Deleuze and Guattari introduce an idea of thinking in terms of “responsibility before”. The transformation of the preposition “for” into “before” has agential implications. As they write: “We are not responsible for the victims but responsible before them.”<sup>20</sup> To act, create and transform cannot occur through an escapism from that what they call “ignoble” in order to look for an outside position of judgement. Such escapism only fuels the ignoble. We must “play the part of the animal (to growl, burrow, snigger, distort ourselves): though itself is sometimes closer to an animal that dies than to a living, even democratic, human being.”<sup>21</sup>

The notion of “responsibility before” is triggered by “shame,” which allows for embodiment of the multiple relationality that one finds to become-with. As Deleuze and Guattari write: “The feeling of shame is one of philosophy’s most powerful motifs.”<sup>22</sup> It would be the kind of shame one experiences encountering Zaretsky’s work. It is a shame that has nothing to do with the pity that puts an immediate power relation into play. It is rather a material phenomenon that can be compared to an experience of synaesthesia, when sound has the immediate material capacity to produce colour. The sound of the word “shame” spoken in your native language, rings not only as a concept, but reverberates in your guts, leaving the memory of anxiety and stomach ache. The word that reminds you of a non-linguistic world of meaning and, most importantly, of non-subjective forms of agency – where you are immersed in the world of multiple others, encountering and residing already within you. It is through such a notion of shame that responsibility emerges. Not as a moral duty, but as an encounter with agency that can be touched, felt and, as a result of the encounter you are mutually transformed.

What Deleuze and Guattari seem to propose is a sense of responsibility that focuses neither on the care for something because of existing inequalities, nor in the name of pursuing the resolution of those inequalities. Affect that generates the onto-epistemological practice of thought and thinking practice of bodies demands rather the notion of responsibility that is beyond moralizing systematization and the pursuit of consensual agreements. The ethics of contamination would thus be about keeping the vibration, the tension that is to

<sup>19</sup> “Responsibility, N.,” *OED Online* (Oxford University Press), <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/163862>, accessed 10 February 2017.

<sup>20</sup> Gilles Deleuze, Félix Guattari, *What Is Philosophy?* (London [etc.]: Verso, 1994), 108.

<sup>21</sup> *Ibid.*

<sup>22</sup> *Ibid.*

stimulate difference and that is to resist any *ressentiments* of identity and sameness that forces consensus. As Deleuze argues:

Morality presents us with a set of constraining rules of a special sort, ones that judge actions and intentions by considering them in relation to transcendent values (this is good, that's bad...); ethics is a set of optional rules that assess what we do, what we say, in relation to the ways of existing involved. We say this, do that: what way of existing does it involve?<sup>23</sup>

Deleuze's question: "what way of existing does it involve?"<sup>24</sup> reveals the onto-epistemo-ethical entanglements. The next question that would follow would be: how can we act ethically? What would such ethics beyond morality be like today, for the multibodies, mutants of the present future?

I have argued for an understanding of affect that is relational, transformative and which can be conditioned through the continuous relations of experimentations as discussed in Chapter 2. Such experimentation would follow and generate new material meanings (Chapter 3) that work according to the logic of multiplication of increasing encounters, intensifying the relations and producing new affects (Chapter 4). As I have written elsewhere: "In such a way, ethics is intertwined with aesthetics, as it seeks to invent new possibilities of life, new ways of existing in terms of experimenting with new relations, in terms of how it is to affect and be affected by."<sup>25</sup> For artists, the onto-epistemo-ethico-aesthetic practice of bodies is apparently already inherent in their practice. In particular, as discussed in this book, bioart's engagement with living matters imperceptibly yet profoundly and vividly practices the multiple dimensionality of an infectious ethics. Implicitly, I have already demonstrated the affective way of dealing with bodies in bioart's practice that urges a consequent conceptualization of affect for practicing bodies within affect. Yet, one last argument deserves consideration in the context of the new concept of ethics that must be created.

Zylinska writes: "Bioartistic experiments not only undermine the metaphysical understanding of life but also challenge the traditional humanist value-based ethics, where this nebulous entity called 'human life' is posited as a value in advance, something to be protected at all cost."<sup>26</sup> It is thus not about bioart being the only party with the capacity of a critical approach to life. After all, biotechnological practices are perfectly fine on their own for securing bioethical standards and undermining any dogmatic understanding of

<sup>23</sup> Gilles Deleuze, *Negotiations, 1972-1990* (New York: Columbia University Press, 1995), 100.

<sup>24</sup> *Ibid.*

<sup>25</sup> Agnieszka Anna Wołodźko, "Materiality of Affect: How Art Can Reveal the More Subtle Realities of an Encounter," in *This Deleuzian Century: Art, Activism, Life*, (eds) Rick Dolphijn and Rosi Braidotti (Leiden/Boston, MA: Brill, 2015), 179.

<sup>26</sup> Joanna Zylinska, "Taking Responsibility for Life: Bioethics and Bioart," in *Ethics and the Arts*, ed. Paul Macneill (Springer Netherlands, 2014), 194, [https://doi.org/10.1007/978-94-017-8816-8\\_17](https://doi.org/10.1007/978-94-017-8816-8_17).

actual scientific findings and argumentation. The point she is making lies rather in a non-pragmatic orientation of bioart's practices, which she calls "non-goal oriented agendas."<sup>27</sup> Bioart and science, as Zylinska argues,

are often developed from within the same labs and are part of the same research grants, [yet] bioart's mission is ostensibly different from the one embraced by the biotechnological industry. The primary business of bioart is the representation, articulation and open-ended creation of newforms and modes of life – not capital-induced production of Life.<sup>28</sup>

For this reason, as she further argues, the given norms of bioethics, those that are applied to researchers working in the same labs, cannot be applied to artists. Such a statement provokes a troubling question, however, about whether there are any limits to art's playing with life. For her, bioart's practice with life is justifiable "when bioart takes responsibility for life, without retreating to any predefined entrenched moralist positions about what this life is and how it should be treated."<sup>29</sup>

However, the question remains, what does such responsibility actually mean? What might such responsibility-for be like when it does not refer to any given moralistic norms? Her use of "responsibility for" already suggests, as we have discussed, the presupposition of the relation of power and duty towards a less potent other. While Zylinska refers to "the tendency" to describe ethical relations in Spinozian/Deleuzian terms of affective encounter, she indicates the necessity of human assessment. She seems thus to criticise the affective understanding of ethics, pursuing the inevitability of human judgement regarding which relations are good and which are bad. She calls it "cutting":

The function of this 'cut' is to allow, first, for these and not some other relations to be recognised as individual relations, and, second, for (at least provisional) judgments to be made about those relations. The situation as such demands an assessment from the human – who is capable not only of recognising in him – or herself this propensity for being affected but also of theorising this propensity.<sup>30</sup>

Zylinska actualizes affect within the judgement of good and bad relationality. I argue, however, that the ethics of contamination practiced by bioart happens in the very moment before such actualization takes place, where rather than thinking in terms of responsibility for, something else happens. We think practicing and practice thinking as responsibility

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<sup>27</sup> *Ibid.*, 194.

<sup>28</sup> *Ibid.*, 194–95.

<sup>29</sup> *Ibid.*, 195.

<sup>30</sup> *Ibid.*, 197.

before – as the spaces of tension. The ethics of contamination that I propose here, is not directed at creating a system of practices, manuals about what can or cannot be done. Rather, the ethics of contamination focuses on what we should establish for the tension to occur in a way that would not destroy the bodies but make them proliferate.

The underlying presupposition of this book is that my multiple encounters and processes of thinking with affect result from the contaminated thinking-writing-reading process, which has not been disciplinarily separated. However, the lack of separation between philosophy, art, politics, culture, sciences, biology, technology and many more, does not mean a lack of difference between those multiple platforms, multiple ways of practicing bodies. As I have showed, through the multiple points of view and their contaminants, we encounter temporary agreements and possibilities to think otherwise. These temporary agreements do not imply any universal and fixed methods of how to practice affect, but rather through dynamism and multiplicity of points of view, the necessity of risks and tensions involved in the process of conditioning transformations becomes evident. Through speculation and creation of relations as thinking otherwise we can prolong the tension, and in this way, condition the ethics of contamination for our multibodies.

Thus, the ethics of contamination has emerged from a different kind of logic, one that values not the rules that govern and guarantee its smooth fulfilment, but temporary conditions that sustain the tension between those rules. The ethics of contamination is about creating and producing spaces of encounters where the only telos of this continuous production is a necessity of conviction that something more important might emerge. This is what bioartists have been doing with bodies, changing radically the understanding of what it means to practice the body, to be a body and to mean a body. The question of ethics transforms itself into a plea for thinking otherwise, that the thought as such must be important. This conviction of importance, the importance of importance, will be the driving force of the ethics of affect – it is the plea of the persona that Deleuze named “an idiot” and which we, even if for a moment, must become.

## 5.4 In Search of Resistance

It is quite risky to end a book, especially one that is to prove your academic abilities, with the pursuit of an idiot. I will take the risk, nevertheless, and position an idiot as a conceptual persona that facilitates the practice of thinking with affect. Isabelle Stengers has already formulated such an experimental approach to thinking otherwise by implementing Virginia Woolf’s plea for “Think we must”<sup>31</sup> as a form of resistance in the Deleuzian notion of an

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<sup>31</sup> “But you will object, you have no time to think, you have your battles to fight [...]. That excuse shall not serve you, Madame. As you know from your own experience, and there are facts that prove it, the daughters of educated men have always done their thinking hand to mouth; not under green lamps at study tables in the cloisters of secluded colleges. They have thought while they stirred the pot, while they rocked the cradle [...]. Think we must. Let us think in offices, in omnibuses, while we are standing in the crowd, watching Coronations and Lord Mayor’s

idiot. In Stenger's quest to find a method of creating the spaces and situations in which we would be able to think otherwise, without the urge for progress, quick solution and consensus, she points to the need to prioritize experimentation. She argues for the sheer necessity to experiment with thought, situations and problems, yet not any problem, but only those that "mobilize us."<sup>32</sup> For Stengers, such methods of experimentation would work after adopting Deleuze's conceptual persona of an idiot. Deleuze mapped the persona of an idiot as someone who slows things and others down, but not because something is not true or wrong but because there is something more important: "It's the Idiot's formula: 'You know, there is a deeper problem. I am not sure what it is. But leave me alone. Let everything rot [...] this more urgent problem must be found.'"<sup>33</sup>

The idiot slows down, although the exact issue of importance is not yet known, there is only a sense of it coming. The persona of an idiot, like affect, is not neutral. Moreover, Deleuze distinguishes two kinds of idiot. The first one is Cartesian, "who is the private thinker, in contrast to the public teacher."<sup>34</sup> He is obsessed with truth understood as undeniability and certainty. He – Descartes' idiot – is ready to deny, as Deleuze with Guattari mock, "that  $3+2=5$ ."<sup>35</sup> The other kind of idiot, Deleuze finds in Dostoyevsky, and this is the one who is still "a private thinker, but with a different singularity."<sup>36</sup> He is not driven by truth, but by a sense of importance: "The old idiot wanted truth, but the new idiot wants to turn the absurd into the highest power of thought – in other words, to create."<sup>37</sup> Significantly, those two idiots are never separate beings, but rather the second is a mutation of the first, as they put it: "Descartes goes mad in Russia?"<sup>38</sup>

With the mutation of the persona of an idiot, Deleuze and Guattari show how it is not a question of a dialectical difference between concepts, but rather how to mutate the existing ones. They emphasize the change of focus from what is into what is important. The acknowledgment that there is something much more important becomes a critical condition of thought. Importantly, "critical" here is not understood in a deconstructive

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Shows, let us think as we pass the Cenotaph; and in White Hall; in the galleries of the House of Commons; in the Law Courts; let us think at baptisms and marriages and funerals. Let us never cease from thinking—what is this 'civilization' in which we find ourselves?" Virginia Woolf, *Three Guineas*, quote from: Isabelle Stengers and Vinciane Despret, *Women Who Make a Fuss: The Unfaithful Daughters of Virginia Woolf*, trans. April Knutson, 1<sup>st</sup> edition (Minneapolis, MN: Univocal Publishing, 2014), 26.

<sup>32</sup> Isabelle Stengers, "The Cosmopolitical Proposal," in *Making Things Public: Atmospheres of Democracy*, (eds) Bruno Latour, Peter Weibel, and Zentrum für Kunst und Medientechnologie Karlsruhe (Cambridge, MA: MIT Press, 2005), 994.

<sup>33</sup> Gilles Deleuze, *Two Regimes of Madness: Texts and Interviews, 1975-1995*, 2<sup>nd</sup> edition (New York: Semiotexte/Smart Art, 2008), 317.

<sup>34</sup> Deleuze and Guattari, *What Is Philosophy?*, 62.

<sup>35</sup> *Ibid.*

<sup>36</sup> *Ibid.*

<sup>37</sup> *Ibid.*

<sup>38</sup> *Ibid.*, 63.

sense, but as a creation, as a production of the new, as the urge to create, to make spaces enabling to pose questions of importance.

An idiot becomes understood in this way, as the persona of the ethics of contamination. The idiot of affect is the one who, rather than searching for certainty, stability and intersubjectivity, will search for the uncomfortable question. Significantly, Dostoyevsky's idiot cannot be taken as the idiot Bartleby in Herman Melville's novel *Bartleby The Scrivener*, which Deleuze ascribes with the literal sense of the formula "I would prefer not to."<sup>39</sup> Resistance of an idiot is not directed at its own nihilation, does not end with death, as is the case in Melville's novella. I argue that an idiot of the ethics of contamination is a mutation of not only the Cartesian idiot, but also of Bartleby. Bartleby seems detached from any concerns, ignorant of habitual practices and resistant to conform to any given systems and norms. Instead of following the logic of expectation, consensus of that which can be expected, Bartleby introduces a new logic – "a logic of preference" – which, as Deleuze explains, "is enough to undermine the presuppositions of language as a whole."<sup>40</sup> Because of that, and because of the resistance to norms by following a different logic, the idiot shares a great deal with Bartleby. Yet, Bartleby's resistance does not lead him to any form of creation. The nonsense of Bartleby does not produce, does not generate new logic of new processes, unless we consider the nonsense of the others reacting to his detachment. If Bartleby produces affects, they would be sad ones, ones that stop further relations, ones that destroy bodies. Bartleby's idiot is a withdrawal from the affect, from relations, and it is sustained by pity, not by shame.

When referring to an idiot, I indicate the idiot that is driven by importance, that creates by sustaining the tension in her belief in importance, in desiring for significance rather than remaining in the state of equilibrium that is empty resistance, which is almost close to agreement with the status quo. The idiot of the ethics of contamination is driven by the sense of creativity, by the feeling that something is more important for the sake of creation and production of the new. An idiot resists the status quo by sensing and desiring to think otherwise, to create. She takes a flight and continues the ritual of experimentation; mutating, in this way, even the significance of her resistance.

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<sup>39</sup> Gilles Deleuze, *Essays Critical and Clinical*, trans. Daniel W. Smith and Michael A. Greco (Minneapolis, MN: University of Minnesota Press, 1997), 68.

<sup>40</sup> *Ibid.*, 73.

## 5.5 Encountering the Witches Flight

Although art for nonhumans is an interesting topic that I am also exploring ... essentially art is a manifestation of the human trying to understand themselves, so it is about us, of course, and I have actually pointed it out that it is ultimately not about plants per se because plants here are just one example of how we do or completely do not relate to something that is radically different – this other, this vegetal other. But it does not have to be a vegetal one, it can be another race, an alien, anything that we cannot use this empathy to understand. We need other tools. So, it is a sort of an exploration of this [...] the relationship to plants in particular that for me still remains to be answered or at least sketched out [...]. At the moment, I am still, I would say, in the dark even though I was standing in the light for so long. And I appreciate being in this position because I believe that life in general is very complex and it is absolutely self-indulgent to think that you have the answer.<sup>41</sup>

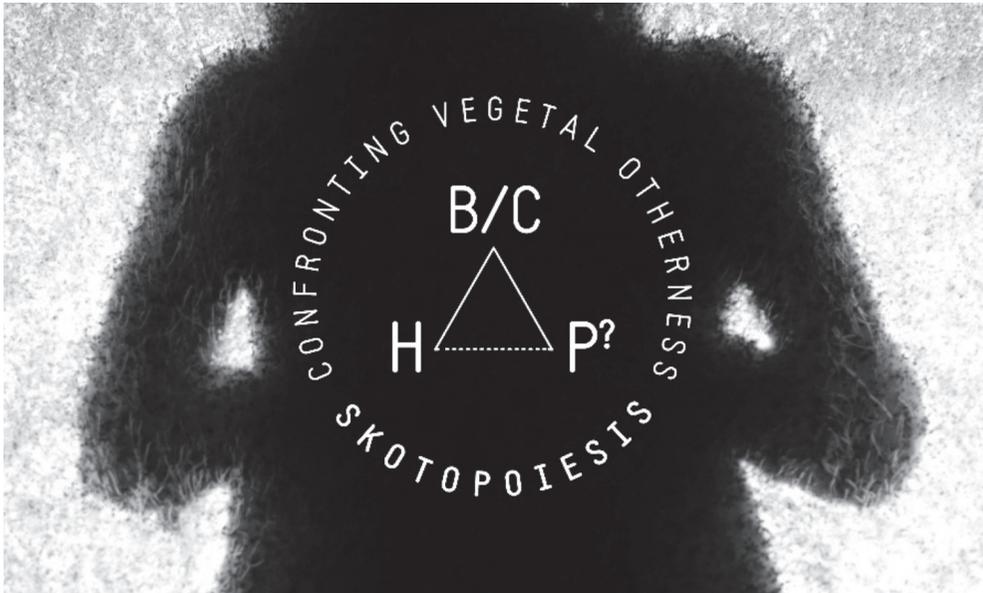


Figure 32. Špela Petrič, *Skotopoiesis*, 2015, performance Galerija Kapelica / Zavod Kersnikova, Ljubljana, <http://www.spelapetric.org/portfolio/skotopoiesis/>, accessed 17 February 2017.

Špela Petrič is an artist, a researcher, a biophilosopher, a biohacker, an educator, a scientist, and a bioactivist who practices the mutating ethics of contaminations. Her continuous travel and nomadic existence means she is based somewhere between her home city of Ljubljana and Amsterdam. I remember my first encounter with her work *Naval Gazing* in 2014 [Figure 33] – a project that won her a *Bioart and Design Award* in the edition of

<sup>41</sup> Špela Petrič, “Confronting Vegetal Otherness: Skotopoiesis,” audio transcript, <http://www.spelapetric.org/portfolio/skotopoiesis/>, accessed 11 February 2017.

“Matter of Life.”<sup>42</sup> *Naval Gazing* was exhibited in the MU gallery in Eindhoven as a reminder of what it was, namely a habitation kinetic machine designed to swim in the North Sea and become a platform for all organisms living in these waters. This “travelling biotope,” while majestic and mysterious in its habitat as the videos screening testified, was awkward, huge and disruptive in the gallery space. Transformed and consumed by the non-human organisms in the sea, it raised a strange dissonance between human desire to control, to familiarize, and the non-human flow of production, transformation and acceptance. This radical encounter, which generates transformations, hesitations and tensions pervades Petrič’s work. During many encounters with Špela, I have gradually learned to find her practice marking what the contaminating matters of affect may involve.



Figure 33. Špela Petrič, *Naval Gazing*, 2014, <http://www.spelapetric.org/portfolio/naval-gazing/>, accessed 17 March 2017.

A performance that literally tests the encounter of tension between human and non-human body, marking what the ethics of contamination are yet to address, is Petrič *Skotopoiesis*, 2015 [Figure 32]. It was part of the project “Trust me, I am an artist” – the same platform that hosted Willet and O’Reilly’s performance discussed in the *Contaminant G*. The *Skotopoiesis*, as the artist explains, denotes “meaning shaped by darkness” and was a performance that explored the possibility of encountering the non-human forms of meaning generation, and an attempt at “plant-human intercognition,”<sup>43</sup> or, as I would call it, a ritual for the ethics of contamination.

The design of the encounter was simple. The human (the artist) was standing in the dark in front of a bed of cress. The only source of light necessary for the plants to grow was

<sup>42</sup> “Matter of Life,” *Bio Art & Design Awards* (blog), <http://www.badaward.nl/matter-of-life/>, accessed 17 February 2017.

<sup>43</sup> Petrič, “Confronting Vegetal Otherness.”

positioned behind the human, so that her body shed a shadow on some parts of the cress. This performance lasted for two days, during which the artist stood for nineteen hours, seemingly passive, yet in a constant relation with the plants. In this event of an encounter that was neither a meeting, nor an interrelation nor an obstacle alone, the artist and the germinating cress faced each other, illuminated by a light projection [Figures 34, 35, 36].

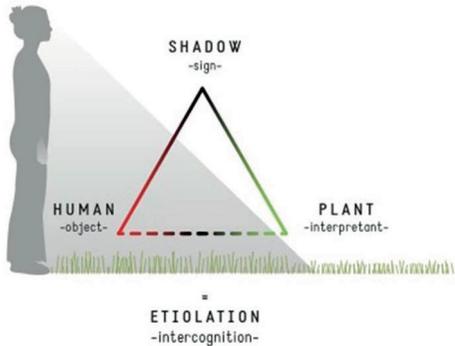


Figure 34. Špela Petrič, *Skotopoiesis*, 2015, performance Galerija Kapelica / Zavod Kersnikova, Ljubljana, <http://www.spelapetric.org/portfolio/skotopoiesis/>, accessed 17 March 2017.

Even though the performance demanded the immobilization of the artist standing in front of the cress, the event of the encounter was not about her being silent. Furthermore, as Petrič herself explains, the relation between human and plant did not concern the question of who stands where, who is more powerless in this power relation context. During the whole performance, as long as she maintained the same shadow thrown on the cress, the artist could talk to the audience, engage in conversation while standing. In this way, rather than focusing on subjects and identities, the work focused on the relation, tension and encounter between multiple agents. That the performance happened in this biosemiotic sphere of relations is clear from the triadic scheme of the performance, where Petrič seems to refer to Peirce's sign theory. The tragic characteristic of a sign, as discussed in Chapter 3, involves a spatio-temporal action where signs, in order to be understood as an active mode of being, must be materially embodied. In this way, *Skotopoiesis* was about exposition of the production of affect, but also affect happening.

For Petrič, experimenting especially within the art scene with animals and human self is immediately and easily positioned within the existing ethical debate. Our relation with animals and human bodies function already within well-established moral boundaries and laws. Creating with plants, however, poses no such immediate ethical dilemma. As she argues, because plants are so different “we have no moral intuition of how we can react to this plant life,” even though plants, as she stipulates, are the crucial part of living systems.



Figure 35. Špela Petrič, *Skotopoiesis*, 2015, performance Galerija Kapelica / Zavod Kersnikova, Ljubljana, <http://www.spelapetric.org/portfolio/skotopoiesis/>, 17 March 2017.

As she puts it, plants do not classify as a “moral being with which we can have empathy.” Because of their radical otherness, which we cannot quickly assimilate into what is, for us, familiar, plants can foster an encounter that she calls “authentic,” and which I would call affective because it is transformative. “Some things are just unlike us,” Petrič claims, therefore the radical challenge is to create a situation that would allow us to encounter the radical other in a transformative, rather than familiar, way. The artist creates thus a condition of resistance with regard to anthropomorphization, the condition of encounter that would reveal the multiple agencies of the non-human: the agencies of light, plants and a human, who, through her kinetic immobility, creates a condition of disruptive communication.



Figure 36. Špela Petrič, *Skotopoiesis*, 2015, performance Galerija Kapelica / Zavod Kersnikova, Ljubljana, <http://www.spelapetric.org/portfolio/skotopoiesis/>, accessed 17 March 2017.

The Anthropos that slows down by creating a form of resistance to the quick solution and consensus, comes close to enacting the persona of an idiot of the ethics of contamination. The resistance to what “ought to be” happens by allowing for the generation of spaces of multiple encounters, but also, by allowing “the whole to generate what each one would have been unable to produce separately.”<sup>44</sup> In her performance, Petrič enacted the persona of an idiot, who slows down and resists in order for something different to occur. In her work, however, the necessity to think outside the anthropocentric significations is never without the acknowledgment of the inevitably asymmetrical relations and anthropocentric privilege she, as a human, embodies.

Nevertheless, through the tension of this hierarchy of bodies in the encounter, her art captures imperceptible biosemiotic movements. This is an experimental approach to thought as practice, the biosemiotic urgency of creating material relations that would foster new processes of thinking. As she explains:

The reason why I am doing this is because I have so many questions and I just have no idea how to answer them and be smart about it and serve the public, you know: ‘this is the way, I have read all the literature, trust me, I am an artist, I know what I am doing!’ Well, I don’t. So, I am hoping that through these series of experiments some things become clearer. Rather than relaying

<sup>44</sup> Stengers, “The Cosmopolitical Proposal,” 1002.

on theory, I will just see how this process transforms me and my thoughts towards this.<sup>45</sup>

This collective understanding of Petrič practicing the persona of an idiot has a different, more resonant, I would say, persona that is a witch during her witchcraft. Not coincidentally, Deleuze and Guattari were writing about demons, sorcery and witchcraft as a possibility to think otherwise. Thinking with demons is thinking with relations, with movements, processes, encounters and tensions – presupposing that it is always a populated act within multiple becomings: “Demons are different from gods, because gods have fixed attributes, properties and functions, territories and codes: they have to do with rails, boundaries and surveys. What demons do is jump across intervals, and from one interval to another.”<sup>46</sup>

The interval jump from an idiot to a new persona reflects a pursuit of a ritual, the repetition of movements through which difference may be produced. Concepts, glossaries, ways of thinking otherwise are neither given, nor neutral. They demand practice of habits, changing and re-shifting those very habits as none of them is separated from the body, form the material and are without material implications. Thus, when Deleuze and Guattari insist that “to think is always to follow the witch’s flight,”<sup>47</sup> we should not take it as a metaphor, but an actual plea for embodying the relational practice of attachments and ritual encounters that would resist and betray your masters:

There is always betrayal in a line of flight. Not trickery like that of an orderly man ordering his future, but betrayal like that of a simple man who no longer has any past or future. We betray the fixed powers which try to hold us back, the established powers of the earth. The movement of betrayal has been defined as a double turning-away: man turns his face away from God, who also turns his face away from man. It is in this double turning-away, in the divergence of faces, that the line of flight – that is, the deterritorialization of man – is traced.<sup>48</sup>

Contaminating matters of affect thus become the contemporary witchcrafts of which bioartists are the witches who establish new ways of practicing bodies and their multiple relationalities. Bodies of biotechnology demand these witches take flight, resist universal capture, create ways to repeat this resistance and sustaining the practice of mutation. Rather than a quick fascination with scientific enhancement, or a too prompt rejection on the grounds of essentialist judgement, today’s bodies of mutation, leaking, porous and multiple,

<sup>45</sup> Petrič, “Confronting Vegetal Otherness.”

<sup>46</sup> Gilles Deleuze and Claire Parnet, *Dialogues*, trans. Hugh Tomlinson and Barbara Habberjam (New York: Columbia University Press, 1987) 40.

<sup>47</sup> Gilles Deleuze, Félix Guattari, *What Is Philosophy?*, 41.

<sup>48</sup> Deleuze and Parnet, *Dialogues*, 40.

demand practices of creative resistance and its continuation. We can learn from these artists, by searching for new concepts, by changing the logic of thinking about bodies into relational and multibiopolitical, or we can remain the idiots of Cartesian consensus. This is not a choice between two opposite ways, between artistic fuzziness and academic rationalism. Rather than being within the epistemological debate, this is a choice concerning the very onto-epistemo-ethical way of life. This is the understanding that, as Zaretsky puts it, you “mutate or you die,<sup>49</sup> which has never been more literal than now, when encountering the very mutants of multibodies that we are.

As Stengers argues, for an idiot, it is not about creating the sphere of “a good common,” but rather it is to “slow down the construction of this common world, to create spaces for hesitation regarding what it means to say ‘good.’”<sup>50</sup> These spaces of hesitation do not regard axiological judgements, the system of moral rules within which we can judge an action, intersubjectively and according to the given law. Rather, the spaces of resistance and hesitation create a sense of the necessity to stay with the trouble, as Haraway would put it. Creating spaces of hesitation means creating spaces of tension, of encounters that are not to be resolved in terms of “good will” of agreement. Instead, the contamination must occur and be sustained. Performing witchcraft through the witches flight is performing the contaminating matters of affect through thinking bodies and bodies of thinking in multiplication of an infinitive: to engage, and to be touched, and to relate, and to experiment, and to disagree, and to be eaten, and to fight, and to love, and to mutate, and to go back, and to think, and to touch, and to eat, and to slow down, and to plant, and to grow, and to act, and to listen, and to resist, and to live, and to die, and to laugh, and to matter, and...

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<sup>49</sup> Peter Vidani, “‘Mutate or Die’ with Adam Zaretsky,” <http://artscienceethics.tumblr.com/MutateOrDie>, accessed 17 February 2017.

<sup>50</sup> Stengers, “The Cosmopolitical Proposal,” 995.



## Epilogue

We are bodies within affect – within mutating and growing relations of transformations. “How to live and practice the contaminating bodies within affect?” thus becomes a futile question, since we are already immersed within contaminations. The question of how to practice becomes rather a question of how to condition the growth and multiplication of that practice, since we tend to enact bodies as if we were autonomous, as if our thoughts were clear and certain. We live in the world of shadows, our knowledge is only partial; nevertheless, we are prone to quickly implement the belief in given categorizations and universalization. And yet, when we breathe, we change, and when we meet we transform each other, multiply and contaminate. Transformations happen imperceptibly, involuntarily, not only within the secured spaces of the clean lab, but also here, on this very page and moment, in a daily life of our many personas and non-personal multiple existence. If we can create the human-pig embryos, multispecies creatures, solar mutants and post-atomic food, can we also live with them all, as them?

When science and technology invent new bodies, new ideas about those bodies, we need new stories, new relations and ways of living and practicing those bodies. We need new modulating practices of thinking and think practicing where art, philosophy and science are not separate, but also do not form a convenient consensus. Rather, the multiple disciplines and bodies need space to be able to continue to challenge each other. We need to think about not only affect, but within affect – within the contaminations, spaces of risks, hesitations and doubt. Creation of spaces of tensions and experimentation becomes a way how to think about implications of affect for the way we practice contaminating matters. In other words, not only “think we must” as Isabelle Stenger, following Virginia Woolf, called

for,<sup>1</sup> but we need to think in a particular way. We need to allow ourselves to take thinking as contamination to be our continuous practice of bodies' transformative relationality.

The contaminating character of affect fosters new challenges and risks. Bodies within affect might be destroyed, changed, multiplied. Contamination as such, rather than being opposite to purity, becomes against the status quo, against the fixed identities. We become contagions of becoming, transemiotic GMOs that need to learn how to think with contagion so that we can further multiply and move, rather than remain fixed, within given hierarchies and segregations. Living within affect demands facing the radical risk of an encounter and the challenge of sustaining that risk and tension between multiple points of view. Sustaining the risk, diffractions and tensions between encountering bodies, species and even disciplines, as this book has demonstrated, becomes a new challenge of thinking and living within affect.

Importantly, the discussed bodies within affect do not suggest a release of tension by finding a common ground, but rather they demand securing the spaces and ways of contamination so that such a common ground does not become fixed and universal. Bodies within affect call for securing difference while differing, so that we are able to think otherwise each time, when encountering, relating with other bodies – be it species, disciplines, thoughts. Inevitably, bodies of affect generate questions of responsibility before the contaminations. The contaminating relationality of affect expresses messiness and risk that rather something to be avoided and managed, needs to be confronted and lived with, gaining, in this way, a perspective that fosters new material sensitivities, existential meanings and importance. But are you ready to touch the navel of our multibody?

Affect implies the understanding of meaning that transverses species division, making meaning a capacity of multispecies. Through continuous material repetitions of contaminations, we can condition encounters between bodies and, in this way, condition their creation of new meanings. This material meanings, rather than driven by the given logic of identification and signification, would respond to material and embodied sense of importance. It is the sense of importance that drives and generates our bodies that we need to learn how to sense, organize and sustain in their modulating transformations. It is a challenge, since how to know what is important, what might be important without prioritizing or excluding others?

Our multibodies create transformative relationality according to conditions of what happen to be impersonal yet vital within a particular relationality. To foster such a notion of material meaning would be to create conditions of continuations of such relationality where new meanings, new arrangements of what becomes important formulate themselves. We need, then, to search for conditions and to experiment with these conditions, but not in order to find a universal method for their material application. Experimentation and search, in that sense, can never be fulfilled, never finished – it becomes a dark and hungry movement of our becoming. We can practice affect so that the relations of contaminations

<sup>1</sup> Stengers and Despret, *Women Who Make a Fuss*, 27–31.

can be continued by repeating the search. We are blind in this world of shadows, but our disability becomes our capacity for the growing urge for relationality, experimentation with what we do not know.

The crucial challenge is, however, how to repeat the practice of such relational experimentations and searching in a way that does not result in us falling into what we habitually consider as our prior sense of self, of identity. After all, it is me, not the multiple, writing this book, in order to prove my academic abilities. I cannot therefore question the very existence of my agency here, can I? Yet, we can find an impersonal multibody that was driving the very thinking and living process of the search.

Thinking with the impersonal is thinking with the collective on the material scale that contaminates and transforms bodies within their relationality and encounters. Multibody of contaminants in this book, like those of G, P, E, B, S, T, C, M, O, S, A, V, becomes not only narrations of affect, little stories of transformation, but your and my new multibody, which we have become while reading. This multibody becomes a dynamic and material condition of how we can practice and continue to condition the practice of affect. Such a notion of agency, which is not one but more, that becomes a multibody of moving and mutating relationality while relating, as impersonal, fosters a different organization of relationality – a different condition of affect. Contamination becomes our immunity from fixation and identity. To live within contamination implies living in constant tension and encounter with the fear of losing once identity.

Bodies of affect foster an ethics of contamination – a condition of creating spaces and encounters so that transformations may occur and be exercised. Through learning and continuing the relations of transformations, by sustaining the tensions of contaminations, we foster not only thinking with affect, but living with the consequences of affect – the contaminating, impersonal, driven by necessity mutating multispecies multibody that we are, again and again, anew. The question is, are we ready to practice the multiple – to practice bodies within affect?



# Literature

- Agamben, Giorgio. *Homo Sacer. Sovereign Power and Bare Life*. Translated by Daniel Heller-Roazen. Stanford: Stanford University Press, 1998.
- Alaimo, Stacy, and Susan J. Hekman. *Material Feminisms*. Bloomington, IN [etc.]: Indiana University Press, 2008.
- Alaimo, Stacy. *Bodily Natures: Science, Environment, and the Material Self*. Bloomington, IN: Indiana University Press, 2010.
- Altieri, Charles. *The Particulars of Rapture: An Aesthetics of the Affects*. Ithaca, NY: Cornell University Press, 2003.
- Amill, Vanessa Rivera. "The Human Microbiome and the Immune System: An Ever Evolving Understanding." *Journal of Clinical & Cellular Immunology* 05, no. 06 (2014): 1-5. doi:10.4172/2155-9899.1000e114.
- Amirtha, Tina. "Banking on Stool despite an Uncertain Future." *Science* 352, no. 6291 (June 9, 2016): 1261–62. doi:10.1126/science.352.6291.1261.
- Angerer, Marie-Luise. *Ecology of Affect*. Lüneburg: Meson Press, 2017.
- Askin, Ridvan. Paul J. Ennis, Andreas Hägler, and Philipp Schweighauser, eds. *Speculations V: Aesthetics in the 21st Century*. Brooklyn, NY: Punctum Books, 2014.
- Badiou, Alain. "Preface" in Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier, vi–viii. London/New York: Bloomsbury Academic, 2010.
- Bakke, Monika. "Zoe-philic Desires: Wet Media Art and Beyond," *Parallax* 14/3 (2008): 21–34.
- Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press Books, 2007.
- Barbieri, Marcello. "What Is Biosemiotics?" *Biosemiotics* 1, no. 1 (February 13, 2008): 1–3. doi:10.1007/s12304-008-9009-1.
- Bell, Shannon. "Accident of Art," in *The Virilio Dictionary*, edited by John Armitage, 19–22. Edinburgh: Edinburgh University Press, 2013.
- Bishop, Claire. "Antagonism and Relational Aesthetics." *OCTOBER* vol.110 (Fall 2004): 51–80.

- Bishop, Claire. *Artificial Hells: Participatory Art and the Politics of Spectatorship*. London/New York: Verso, 2012.
- Blondel, Eric. *Nietzsche: The Body and Culture: Philosophy as a Philological Genealogy*. Stanford, CA: Stanford University Press, 1991.
- Bourriaud, Nicolas. *Relational Aesthetics*. Translated by Simon Pleasance and Fronza Woods. Les Presse Du Reel, France, 2002.
- Braidotti, Rosi. *Nomadic Theory: The Portable Rosi Braidotti*. New York: Columbia University Press, 2011. Kindle edition.
- Braidotti, Rosi. *The Posthuman*. Cambridge/Malden, MA: Polity, 2013.
- Braidotti, Rosi. *Transpositions: On Nomadic Ethics*. Cambridge etc: Polity, 2006.
- Braidotti, Rosi. "Locating Deleuze's Eco-Philosophy between Bio/Zoe-Power and Necro-Politics." In *Deleuze and Law*, edited by Rosi Braidotti, Claire Colebrook, 96–116. London: Palgrave Macmillan, 2009.
- Braidotti, Rosi. *Metamorphoses: Towards a Materialist Theory of Becoming*. Cambridge, UK ; Malden, MA: Polity, 2002.
- Braidotti, Rosi. *Nomadic Subjects*. New York: Columbia University Press, 1994.
- Brennan, Teresa. *The Transmission of Affect*. Ithaca, NY: Cornell University Press, 2004.
- Brinkema, Eugenie. *The Forms of the Affects*. Durham, NC/London: Duke University Press Books, 2014.
- Buchanan, Brett. *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze*. Albany, NY: State University of New York Press, 2009.
- Burge, Kristen L. "Personalized Medicine, Genetic Exceptionalism, and the Rule of Law: An Analysis of the Prevailing Justification for Invalidating BRCA1/2 Patents in Association of Molecular Pathology v. USPTO." *Washington Journal for Law, Technology & Arts* 8, no. 4 (2013): 501–541.
- Caze Marguerite La and Henry Martyn Lloyd. "Editors' Introduction: Philosophy and Affective Turn." *Parrhesia* 13 (2011): 1–13.
- Choi, Hyun Ho, and Young-Seok Cho. "Fecal Microbiota Transplantation: Current Applications, Effectiveness, and Future Perspectives." *Clinical Endoscopy* 49, no. 3 (2016): 257–65.
- Cohen, Robert S., and Thomas Schnelle, eds. *Cognition and Fact: Materials on Ludwik Fleck*. 1986 edition. Dordrecht/Boston, MA: Springer, 1986.
- Colebrook, Claire. *Irony*. London; New York: Routledge, 2005.
- Cook-Deegan, Robert, and Annie Niehaus. "After Myriad: Genetic Testing in the Wake of Recent Supreme Court Decisions about Gene Patents." *Current Genetic Medicine Reports* 2, no. 4 (2014): 223–241. doi:10.1007/s40142-014-0055-5.
- Coole, Diana, and Samantha Frost, eds. *New Materialisms: Ontology, Agency, and Politics*. Durham NC/London: Duke University Press Books, 2010.
- Curd, Martin. *The Routledge Companion to Philosophy of Science*. 2<sup>nd</sup> edition. Routledge Philosophy Companions. Florence: Taylor and Francis, 2013.
- Da Costa, Beatriz, and Kavita Philip, eds. *Tactical Biopolitics: Art, Activism, and Technoscience*. Cambridge, MA/London: The MIT Press, 2010.
- Deely, John. *Basics of Semiotics. Advances in Semiotics*. 1<sup>st</sup> edition. Bloomington, IN: Indiana University Press, 2004.

- DeLanda, Manuel. "Material Affectivity" lecture at PennDesign, September 17, 2014, Vimeo, accessed April 7, 2016, <https://vimeo.com/107274730>.
- Deleuze, Gilles and Claire Parnet. *Dialogues II*. Translated by Hugh Tomlinson and Barbara Habberjam. Revised edition. New York: Columbia University Press, 2007.
- Deleuze, Gilles and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated and foreworded by Brian Massumi. London: Continuum, 2004.
- Deleuze, Gilles and Félix Guattari. *Anti-Oedipus*. Translated by Robert Hurley, Mark Seem, and Helen R. Lane. London: Bloomsbury Academic, 2015.
- Deleuze, Gilles and Félix Guattari. *What Is Philosophy?* Translated by Graham Burchell and Hugh Tomlinson London etc: Verso, 1994.
- Deleuze, Gilles. *Expressionism in Philosophy: Spinoza*. Translated by Martin Joughin. New York: Cambridge, Mass: Zone Books, 1992.
- Deleuze, Gilles. "Lecture on Spinoza at Vincennes in 24.01.1978." Translated by Timothy S. Murphy. *Webdeleuze*, accessed April 24, 2017, <https://www.webdeleuze.com/textes/14>.
- Deleuze, Gilles. *Cinema I: The Movement-Image*. Translated by Hugh Tomlinson and Barbara Habberjam. Minneapolis, MN: University of Minnesota Press, 1986.
- Deleuze, Gilles. *Cinema II: The Time-Image*. Translated by Hugh Tomlinson and Robert Galeta. Minneapolis, MN: University of Minnesota Press, 1989.
- Deleuze, Gilles. *Desert Islands: And Other Texts, 1953--1974*. Edited by David Lapoujade. Translated by Mike Taormina. Los Angeles, CA/Cambridge, MA: Semiotext, 2004.
- Deleuze, Gilles. *Difference and Repetition*. Translated by Paul Patton. New York: Columbia University Press, 1995.
- Deleuze, Gilles. *Essays Critical and Clinical*. Translated by Daniel W. Smith and Michael A. Greco. Minneapolis, MN: University of Minnesota Press, 1997.
- Deleuze, Gilles. *Foucault*. Translated by Sean Hand. Minneapolis, MN: University of Minnesota Press, 1988.
- Deleuze, Gilles. *Francis Bacon: The Logic of Sensation*. Translated by Daniel W. Smith. Minneapolis, MN: University of Minnesota Press, 2005.
- Deleuze, Gilles. *Negotiations, 1972-1990*. Translated by Martin Joughin. New York: Columbia University Press, 1995.
- Deleuze, Gilles. *Nietzsche and Philosophy*. Translated by Hugh Tomlinson. London: Continuum, 2002.
- Deleuze, Gilles. *Proust and Signs*. Translated by Richard Howard. London: Continuum, 2008.
- Deleuze, Gilles. *Spinoza: Practical Philosophy*. Translated by Robert Hurley. 1st in English edition. San Francisco: City Lights Publishers, 2001.
- Deleuze, Gilles. *The Logic of Sense*. Translated by Mark Lester. London, New York: Continuum, 2004.
- Deleuze, Gilles. *Two Regimes of Madness: Texts and Interviews, 1975-1995*. Edited by David Lapoujade. Translated by Ames Hodges and Mike Taormina. 2nd edition. New York: Semiotext(e); London: MIT Press, 2008.
- Descartes, René. *The Passions of the Soul*. Translated by Stephen H. Voss. Hackett Publishing, 1989.
- Devlin, Hannah. "First Human-Pig 'Chimera' Created in Milestone Study." *The Guardian*, January 26, 2017, sec. Science, accessed March 17, 2017, <https://www.theguardian.com/science/2017/jan/26/first-human-pig-chimera-created-in-milestone-study>.
- Dewey, John. "Affective Thought." In John Dewey, *The Later Works, 1925-1953. Vol. 2: 1925-1927*, 104-110. Carbondale, CO etc: Southern Illinois University Press, 1984.

- Dewey, John. *Art as Experience*. New York: Perigee, 2005.
- Dewey, John. *Philosophy and Civilization*. Whitefish, MT: Kessinger Publishing, LLC, 2005.
- Dickenson, Donna. *Property in the Body: Feminist Perspectives*. 1st edition. Cambridge/New York: Cambridge University Press, 2007.
- Dickenson, Donna. *Body Shopping: Converting Body Parts to Profit*. 1st edition. Oxford: Oneworld Publications, 2009.
- Dickenson, Donna. *Me Medicine vs. We Medicine: Reclaiming Biotechnology for the Common Good*. New York: Columbia University Press, 2013.
- Dietert, Janice and Rodney Dietert. "The Sum of Our Parts | The Scientist Magazine®." *The Scientist*, accessed May 23, 2016, <http://www.thescientist.com/?articles.view/articleNo/43379/title/The-Sum-of-Our-Parts/>.
- Dinan Timothy G. and John F. Cryan. "Mood by Microbe: Towards Clinical Translation." *Genome Medicine* 8, no. 36 (2016): 1-3.
- Dolphijn, Rick, and Iris van der Tuin. *New Materialism: Interviews & Cartographies*. Ann Arbor, MI: MPublishing, University of Michigan Library, 2012.
- Dolphijn, Rick. *Foodscape: Towards a Deleuzian Ethics of Consumption*. Delft: Eburon Publishers, Delft, 2005.
- Drohan, Christopher M. *Deleuze and the Sign*. Edited by Wolfgang Schirmacher. New York: Atropos Press, 2009.
- Duffy, Simon. *The Logic of Expression: Quality, Quantity and Intensity in Spinoza, Hegel and Deleuze*. Aldershot, Hants; Burlington, VT: Ashgate Pub Co, 2006.
- Esposito, Roberto. *Bios: Biopolitics and Philosophy*. Translated by Timothy Campbell. Minneapolis, MN: University of Minnesota Press, 2008.
- Esposito, Roberto. *Immunitas: The Protection and Negation of Life*. Translated by Zakiya Hanafi. Cambridge/Malden MA: Polity, 2011.
- Esposito, Roberto. *The Third Person*. Translated by Zakiya Hanafi. Cambridge: Polity, 2012.
- Fleck, Ludwik, and Thomas S. Kuhn. *Genesis and Development of a Scientific Fact*. Edited by Thaddeus J. Trenn and Robert K. Merton. Translated by Frederick Bradley. Chicago, IL: University of Chicago Press, 1981.
- Foucault, Michel. *The Birth of the Clinic: An Archaeology of Medical Perception*. Translated by A. M. Sheridan Smith. New York: Vintage, 1994.
- Gallagher, James. "Human-Pig 'Chimera Embryos' Detailed." *BBC News*, January 26, 2017, sec. Health, accessed March 17, 2017, <http://www.bbc.com/news/health-38717930>.
- Gallo, Richard L., Thomas Hultsch, and Lauge Farnaes. "Recognizing That the Microbiome Is Part of the Human Immune System Will Advance Treatment of Both Cancer and Infections." *Journal of the American Academy of Dermatology* 74, no. 4 (April 2016): 77274. doi:10.1016/j.jaad.2015.11.039.
- Galloway, Alexander R., and Eugene Thacker. *The Exploit: A Theory of Networks*. Minneapolis, MN: University of Minnesota Press, 2007.
- Gessert, George. *Green Light: Toward an Art of Evolution*. 1st edition. Cambridge, MA: The MIT Press, 2010.
- Gregg, Melissa, and Gregory J. Seigworth, eds. *The Affect Theory Reader*. Durham, NC: Duke University Press Books, 2010.
- Grosz, Elizabeth. *The Nick of Time: Politics, Evolution, and the Untimely*. Durham, NC: Duke University Press Books, 2004.

- Groys, Boris. *Art Power*. Cambridge, MA: MIT Press, 2008.
- Guattari, Félix. *Chaosmosis: An Ethico-Aesthetic Paradigm*. Translated by Julian Pefanis. Bloomington, IN: Indiana University Press, 1995.
- Gumbrecht, Hans. *Production of Presence: What Meaning Cannot Convey*. Stanford, CA: Stanford University Press, 2003.
- Hacking, Ian. *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science*. Cambridge: Cambridge University Press, 1983.
- Haraway, Donna and Martha Kenney. "Anthropocene, Capitalocene, Chthulhocene." In *Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environments and Epistemologies*, edited by Heather Davis and Etienne Turpin, 255- 270. London: Open Humanities Press, 2014.
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies* 14, no. 3 (1988): 575–599. doi:10.2307/3178066.
- Haraway, Donna. *Simians, Cyborgs, and Women: The Reinvention of Nature*. 1st edition. New York: Routledge, 1990.
- Haraway, Donna. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press Books, 2016.
- Haraway, Donna. *When Species Meet*. Minneapolis, MN: University of Minnesota Press, 2007.
- Harris, Paul. "Angelina Jolie's Cancer Decision Highlights Row over Genetic Technology." *The Guardian*, accessed May 21, 2015, <http://www.theguardian.com/film/2013/may/19/angelina-jolie-cancer-row-genetic-technology>.
- Hauser, Jens. "Bio Art – Taxonomy of an Etymological Monster." *Hybrid. Living in Paradox, Ars Electronica*, 2005, access September 4, 2013, [http://90.146.8.18/en/archives/festival\\_archive/festival\\_catalogs/festival\\_artikel.asp?iProjectID=13286](http://90.146.8.18/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=13286).
- Hauser, Jens. "Observations on an Art of Growing Interest Toward a Phenomenological Approach to Art Involving Biotechnology." In *Tactical Biopolitics: Art, Activism, and Technoscience*, edited by Beatriz da Costa and Kavita Philip, 83-104. Cambridge, MA/London: The MIT Press, 2010.
- Heidegger, Martin. *What Is Called Thinking?* Translated by F. Wieck and J. Glenn Gray. New York: Harper & Row, 1968.
- Hemmings, Clare. "Invoking Affect: Cultural Theory and the Ontological Turn." *Cultural Studies* 19, no. 5 (2005): 548–567.
- Hoffmeyer, Jesper. "Why Do We Need a Semiotic Understanding of Life." In *Beyond Mechanism: Putting Life Back into Biology*, edited by Brian G. Henning, Adam Scarfe, 147–68. Lanham, MD: Lexington Books, 2015.
- Hoffmeyer, Jesper. *Signs of Meaning in the Universe*. Bloomington, IN: Indiana University Press, 1997.
- Howells, Tom. *Experimental Eating*. London: Black Dog Publishing, 2015.
- Jensen, Kyle, and Gloria Bevan. "Intellectual Property Landscape of the Human genome. (INTELLECTUAL PROPERTY)." *Science* 310, no. 5746 (2005): 23940. doi:10.1126/science.1120014.
- Joly, Yann, and Patricia N. Tonin. "Social, Ethical and Legal Considerations Raised by the Discovery and Patenting of the BRCA1 and BRCA2 Genes." *New Genetics and Society* 33, no. 2 (2014): 167–180. doi:10.1080/14636778.2014.914849.
- Kant, Immanuel. *Critique of Judgment*. Translated by Werner S. Pluhar. Indianapolis, IN: Hackett Publishing Company, 1987.
- Kant, Immanuel. *Lectures on Ethics*. Edited by J. B. Schneewind. Translated by Peter Heath. New edition. New York: Cambridge University Press, 1997.
- Karatani, Kojin, and Sabu Kohso. *Transcritique: On Kant and Marx*. Cambridge, MA: MIT Press, 2005.

- Karpowicz, Phillip, Cynthia B. Cohen, and Derek J. Van Der Kooy. "Developing Human-Nonhuman Chimeras in Human Stem Cell Research: Ethical Issues and Boundaries." *Kennedy Institute of Ethics Journal* 15, no. 2 (2005): 107–134.
- Keller, Evelyn Fox. *The Mirage of a Space between Nature and Nurture*. Durham, NC: Duke University Press Books, 2010.
- Koepsell, David. *Who Owns You: The Corporate Gold Rush to Patent Your Genes*. 1st edition. Chichester/Malden, MA: Wiley-Blackwell, 2009.
- Korn, Matthew J., and Karina S. Cramer. "Windowing Chicken Eggs for Developmental Studies." *Journal of Visualized Experiments: JoVE*, no. 8 (October 1, 2007). doi:10.3791/306.
- Kosofsky Sedgwick, Eve. *Touching Feeling: Affect, Pedagogy, Performativity*. Durham, NC: Duke University Press Books, 2002.
- Kull, Kalevi, Claus Emmeche, and Jesper Hoffmeyer. "Why Biosemiotics? An Introduction to Our View on the Biology of Life Itself." In *Towards a Semiotic Biology: Life Is the Action of Signs*, edited by Claus Emmeche and Kalevi Kull, 1–21. London/Singapore/Hackensack, NJ: Imperial College Press, 2011.
- Latour, Bruno, Steve Woolgar, and Jonas Salk. *Laboratory Life: The Construction of Scientific Facts*. 2nd edition. Princeton, NJ: Princeton University Press, 1986.
- Latour, Bruno. *Pandora's Hope: Essays on the Reality of Science Studies*. 1st edition. Cambridge, MA: Harvard University Press, 1999.
- Latour, Bruno. *We Have Never Been Modern*. Translated by Catherine Porter. Cambridge, MA: Harvard University Press, 1993.
- Laval-Jeantet, Marion. "May the Horse Live in Me," Hemispheric Institute E-Misférica, accessed September 9, 2015, <http://hemisphericinstitute.org/hemi/fr/e101-jeantet-essay>.
- Laval-Jeantet, Marion. "Self-Animality." Text. <http://art-science.univ-paris1.fr/plastik>, accessed June 3, 2011, <http://art-science.univ-paris1.fr/plastik/document.php?id=559>.
- Lazcano, Antonio and Peretó, Juli. "On the Origin of Mitosing Cells: A Historical Appraisal of Lynn Margulis Endosymbiotic Theory." *Journal of Theoretical Biology, The origin of mitosing cells: 50th anniversary of a classic paper by Lynn Sagan Margulis* 434, no. Supplement C (December 7, 2017): 80–87. doi.org/10.1016/j.jtbi.2017.06.036.
- Ledford, Heidi. "CRISPR, the Disruptor." *Nature News* 522, no. 7554 (June 4, 2015): 20. doi:10.1038/522020a.
- Ledford, Heidi. "CRISPR: Gene Editing Is Just the Beginning." *Nature News* 531, no. 7593 (March 10, 2016): 156. doi:10.1038/531156a.
- Lem, Stanisław. *Przekładaniec*, Warszawa: Agora, e-book, 2012.
- Lévi-Strauss, Claude. *Structural Anthropology*. Translated by Claire Jacobson and Brooke Grundfest Schoepf. New York: Basic Books, 1963.
- Leys, Ruth. "The Turn to Affect: A Critique," *Critical Inquiry* 37, no. 3 (1 March 2011): 434–472.
- Lloyd, Genevieve. *Part of Nature: Self-Knowledge in Spinoza's Ethics*. Ithaca, NY: Cornell University Press, 1994.
- Malik, Saira. "Observation Versus Experiment: An Adequate Framework for Analysing Scientific Experimentation?" *Journal for General Philosophy of Science* 48, no. 1 (March 1, 2017): 71–95. doi:10.1007/s10838-016-9335-y.
- Margulis, Lynn. *Symbiotic Planet: A New Look at Evolution*. Revised edition. New York: Basic Books, 1999.

- Martens, Eric C. "Microbiome: Fibre for the Future." *Nature* 529, no. 7585 (January 14, 2016): 158–59. doi:10.1038/529158a.
- Massumi, Brian. *Parables for the Virtual: Movement, Affect, Sensation*. 1st edition. Durham, NC: Duke University Press Books, 2002.
- Massumi, Brian. *Politics of Affect*. 1st edition. Cambridge, UK; Malden, MA: Polity, 2015.
- McNamee, Shane Patrick. "Human-Animal Hybrids and Chimeras: What's in a Name?" *JAHHR - European Journal of Bioethics* 6, no. 11 (May 6, 2015): 45–66.
- McVeigh, Karen. "US Supreme Court Rules Human Genes Cannot Be Patented," *The Guardian*, accessed February 7, 2015, <http://www.theguardian.com/law/2013/jun/13/supreme-court-genes-patent-dna>.
- Meadow, James F., Adam E. Altrichter, Ashley C. Bateman, Jason Stenson, G. Z. Brown, Jessica L. Green, and Brendan J. M. Bohannan. "Humans Differ in Their Personal Microbial Cloud." *PeerJ* 3 (2015): e1258. doi:10.7717/peerj.1258.
- Meillassoux, Quentin. *After Finitude: An Essay on the Necessity of Contingency*. Translated by Ray Brassier. London/New York: Bloomsbury Academic, 2010.
- Mitchell, Robert E. *Bioart and the Vitality of Media*. Seattle, WA: University of Washington Press, 2010.
- Mol, Annemarie. *The Body Multiple: Ontology in Medical Practice*. Durham, NC: Duke University Press Books, 2003.
- Morris, Charles. *Signification and Significance: A Study of the Relations of Signs and Values*. 3rd edition. Cambridge, MA: The MIT Press, 1968.
- Morton, Timothy. *The Ecological Thought*. Reprint edition. Cambridge, MA: Harvard University Press, 2012.
- Mouffe, Chantal. "Artistic Activism and Agonistic Spaces." *Art & Research. A Journal of Ideas, Contexts and Methods* 1, no. 2 (2007): 1–5.
- Mouffe, Chantal. "Politics and Passions: The Stakes of Democracy." *Ethical Perspectives* 7, no. 2–3 (2000): 146–50.
- Mouffe, Chantal. *The Return of the Political*. Revised edition. London/New York: Verso, 2006.
- Mouffe's Chantal. *Staging Democracy*, video of the lecture at De Balie, Amsterdam, The Netherlands, 3 June 2016, accessed 27 June 2016, [http://www.debalie.nl/agenda/podium/staging-democracy/e\\_9782252/p\\_11766021/](http://www.debalie.nl/agenda/podium/staging-democracy/e_9782252/p_11766021/).
- Ngai, Sianne. *Ugly Feelings*. Cambridge, Mass.: Harvard University Press, 2007.
- O'Sullivan, Simon. "The Aesthetics of Affect: Thinking Art Beyond Representation." *Angelaki: Journal of Theoretical Humanities* 6, no. 3 (2001):125-135.
- Papoulias, Constantina and Felicity Callard. "Biology's Gift: Interrogating the Turn to Affect." *Body & Society* 16, no. 1 (2010): 29-56.
- Paxson, Heather "Microbiopolitics." In *The Multispecies Salon*, edited by Eben Kirksey, 115-121. Durham, NC: Duke University Press Books, 2014.
- Paxson, Heather. "Post Pasteurian Cultures: The Microbiopolitics of Raw Milk Cheese in the United States." *Cultural Anthropology* 23, no. 1 (2008): 15–47. doi:10.1111/j.1548-1360.2008.00002.x.
- Peirce, Charles Sanders. *Philosophical Writings of Peirce*. Edited by Justus Buchler. Courier Corporation, 1955.
- Peirce, Charles Sanders. *The Collected Papers of Charles Sanders Peirce*, Electronic edition reproducing vols. 1–6, edited by C. Hartshorne, P. Weiss. Cambridge, MA: Harvard University Press, 1931–1935; vols. 7–8, edited by A. W. Burks. Cambridge, MA: Harvard University Press, 1958.

- Petrilli, Susan. "Charles Morris's Biosemiotics." *Semiotica* 127 (1999): 67.
- Pignarre, Philippe and Isabelle Stengers. *Capitalist Sorcery: Breaking the Spell*. Translated by Andrew Goffey. Houndmills/New York: Palgrave Macmillan, 2011.
- Plato. *Timaeus and Critias*. Translated by Robin Waterfield. Oxford; New York: Oxford University Press, 2009.
- Protevi, John. *Political Affect: Connecting the Social and the Somatic*. Minneapolis, MN: University of Minnesota Press, 2009.
- Queiroz, João, and Floyd Merrell. "Semiosis and Pragmatism: Toward a Dynamic Concept of Meaning." *Sign Systems Studies*, no. 1 (2006): 37–65.
- Rancière, Jacques. *Dissensus: On Politics and Aesthetics*. Translated by Steven Corcoran. London/ New York: Bloomsbury Academic, 2010.
- Regalado, Antonio. "Engineering the Perfect Baby," *MIT Technology Review*, accessed June 22, 2016, <https://www.technologyreview.com/s/535661/engineering-the-perfect-baby/>.
- Reichle, Ingeborg. *Art in the Age of Technoscience: Genetic Engineering, Robotics, and Artificial Life in Contemporary Art*. Translated by Gloria Custance. Wien/New York: Springer Vienna Architecture, 2009.
- Rhodes, Rosamond, Nada Gligorov, and Abraham Paul Schwab, eds. *The Human Microbiome: Ethical, Legal and Social Concerns*. Oxford/New York: Oxford University Press, 2013.
- Roes, Anne. "The Representation of the Chimaera." *The Journal of Hellenic Studies* 54 (1934): 21–25. doi:10.2307/626487.
- Rohlke, Faith, and Neil Stollman. "Fecal Microbiota Transplantation in Relapsing Clostridium Difficile Infection." *Therapeutic Advances in Gastroenterology* 5, no. 6 (November 2012): 403–20. doi:10.1177/1756283X12453637.
- Rose, Hilary, and Steven Rose. *Genes, Cells, and Brains: The Promethean Promises of the New Biology*. Reprint edition. London/New York: Verso, 2014.
- Saussure, Ferdinand de. *Course in General Linguistics*. Reprint edition. New York: Bloomsbury Academic, 2013.
- Scarfe, Adam C. "Introduction. On a Life-Blind Spot in Neo-Darwinism's Mechanistic Metaphysical Lens." In *Beyond Mechanism: Putting Life Back into Biology*, edited by Brian G. Henning, Adam C. Scarfe, 25–64. Lanham, MD: Lexington Books, 2015.
- Sebeok, Thomas. *Signs: An Introduction to Semiotics*. 2nd edition. Toronto/Buffalo, NJ: University of Toronto Press, Scholarly Publishing Division, 2001.
- Semetsky, Inna. "Deleuze's New Image of Thought, or Dewey Revisited." *Educational Philosophy and Theory* 35, no. 1 (2012): 17–29. doi:10.1111/1469-5812.00003.
- Shaviri, Steven. *Without Criteria: Kant, Whitehead, Deleuze, and Aesthetics*. Cambridge, MA: MIT Press, 2012.
- Shotwell, Alexis. *Against Purity: Living Ethically in Compromised Times*. Minneapolis, MN: University of Minnesota Press, 2016.
- Shusterman, Richard. *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics*. Cambridge/ New York: Cambridge University Press, 2008.
- Shusterman, Richard. *Thinking Through the Body: Essays in Somaesthetics*. Cambridge: Cambridge University Press, 2012.
- Skloot, Rebecca. *The Immortal Life of Henrietta Lacks*. New York: Broadway Books, 2011.
- Smelik, Anneke M., and Nina Lykke, eds. *Bits of Life: Feminism at the Intersections of Media, Bioscience, and Technology*. Seattle, WA: University of Washington Press, 2008.

- Spinoza, Baruch. "Spinoza: Works in Latin," accessed September 11, 2015, <http://users.telenet.be/rwmeijer/spinoza/works.htm>.
- Spinoza, Baruch. *Ethics*. Translated by W. H. White and A. H. Stirling. New edition. Ware: Wordsworth Editions Ltd, 2001.
- Spinoza, Baruch. *Spinoza: Complete Works*. Edited by Michael L. Morgan. Translated by Samuel Shirley. Indianapolis, IN: Hackett Publishing Company, Inc., 2002.
- Stengers, Isabelle. "Deleuze and Guattari's Last Enigmatic Message." *Angelaki* 10, no. 2 (2005): 151–167. doi:10.1080/09697250500417399.
- Stengers, Isabelle. "Introductory Notes on an Ecology of Practices." *Cultural Studies Review* 11, no. 1 (2013): 183–196. doi:10.5130/csr.v11i1.3459.
- Stengers, Isabelle. "The Cosmopolitical Proposal." In *Making Things Public: Atmospheres of Democracy*, edited by Bruno Latour, Peter Weibel, and Zentrum für Kunst und Medientechnologie Karlsruhe, 994–1003. Cambridge, MA: MIT Press, 2005.
- Stengers, Isabelle. and Vinciane Despret. *Women Who Make a Fuss: The Unfaithful Daughters of Virginia Woolf*. Translated by April Knutson. Minneapolis, MN: Univocal Publishing, 2014.
- Sulik, Gayle. "Opinion: Why Jolie's Cancer Test Costs so Much - CNN.com." CNN, accessed May 21, 2015, <http://www.cnn.com/2013/05/24/opinion/sulik-patented-genes/index.html>.
- Supreme Court of the United States Syllabus Association for Molecular Pathology Et Al. *V. Myriad Genetics, Inc., et al. Certiorari to the United States Court of Appeals for the Federal Circuit No. 12–398*. Argued April 15, 2013—Decided June 13, 2013, accessed February 7, 2015, [http://www.supremecourt.gov/opinions/12pdf/12-398\\_1b7d.pdf](http://www.supremecourt.gov/opinions/12pdf/12-398_1b7d.pdf)
- Thacker, Eugene. "Data Made Flesh: Biotechnology and the Discourse of the Posthuman." *Cultural Critique* 53 (2003): 72–97.
- The Center for Genomic Gastronomy. "Eat Less, Live More & Pray for Beans," accessed April 11, 2016, <http://genomicgastronomy.com/work/2012-2/beans-book/>.
- Tsing, Anna Lowenhaupt. *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton, NJ: Princeton University Press, 2015.
- Tuin, Iris van der. "New Feminist Materialisms." *Women's Studies International Forum* 34, no. 4 (July 1, 2011): 271–77. doi:10.1016/j.wsif.2011.04.002.
- Uexküll, Jakob von. *A Foray into the Worlds of Animals and Humans: With a Theory of Meaning*. Translated by Joseph D. O'Neil. Minneapolis, MN: University of Minnesota Press, 2010.
- Vidani, Peter. "'Mutate or Die' with Adam Zaretsky," accessed February 17 2017, <http://artscienceethics.tumblr.com/MutateOrDie>.
- Virilio, Paul. *Art and Fear*. Translated by Julie Rose. London/New York: Continuum, 2004.
- Wade, Nicholas. "New Prospects for Growing Human Replacement Organs in Animals." *The New York Times*, accessed March 17, 2017, <https://www.nytimes.com/2017/01/26/science/chimera-stemcells-organs.html>.
- Wasser, Audrey. "Deleuze's Expressionism." *Angelaki* 12, no. 2 (August 1, 2007): 49–66. doi:10.1080/09697250701754988.
- Wheeler, Wendy. *The Whole Creature: Complexity, Biosemiotics and the Evolution of Culture*. London: Lawrence And Wishart Ltd, 2006.
- Wolfe, Cary. *What Is Posthumanism?* Minneapolis, MN: University of Minnesota Press, 2009.
- Wołodźko, Agnieszka Anna. "Against Nature – Against the Body? Ecocritical Role of Bioart." In *Creative Expression and the 21st Century Education*, edited by Małgorzata Suświłło and Adam Grabowski, 65–79. Olsztyn: UWM, 2015.

- Wołodźko, Agnieszka Anna. "Between Bio(s) and Art – Intensities of Matter in Bioart." In *Innen – Außen – Anders: Körper im Werk von Gilles Deleuze und Michel Foucault*, edited by Ann-Cathrin Drews and Katharina D. Martin, 221-236. Edition Moderne Postmoderne. Publisher, Transcript Verlag, 2017.
- Wołodźko, Agnieszka Anna. "Materiality of Affect: How Art Can Reveal the More Subtle Realities of an Encounter." In *This Deleuzian Century: Art, Activism, Life*, edited by Rosi Braidotti and Rick Dolphijn, 169–84. Leiden: Brill, 2014.
- Wu, Jun, Aida Platero-Luengo, Masahiro Sakurai, Atsushi Sugawara, Maria Antonia Gil, Takayoshi Yamauchi, Keiichiro Suzuki, et al. "Interspecies Chimerism with Mammalian Pluripotent Stem Cells." *Cell* 168, no. 3 (January 26, 2017): 473–486.e15. doi:10.1016/j.cell.2016.12.036.
- Zaretsky, Adam. "Viva Vivo! Living Art Is Dead." *Leonardo* 37, no. 1 (2004): 90–92. doi:10.1162/002409404772828193.
- Zaretsky, Adam. "From the Desk of Adam Zaretsky, Ph.D.," accessed November 9, 2016, <http://docplayer.nl/663342-From-the-desk-of-adam-zaretsky-ph-d.html>.
- Zaretsky, Adam. "VASTAL: The Vivoarts School for Transgenic Aesthetics, Ltd." *ProQuest Dissertations Publishing*, 2012. <http://search.proquest.com/docview/1220674667/>.
- Zepke, Stephen. *Art as Abstract Machine. Ontology and Aesthetics in Deleuze and Guattari*. New York/London: Routledge, 2005.
- Zhang, Faming, Wensheng Luo, Yan Shi, Zhining Fan, and Guozhong Ji. "Should We Standardize the 1,700-Year-Old Fecal Microbiota Transplantation?" *The American Journal of Gastroenterology* 107, no. 11 (November 2012): 1755–1755. doi:10.1038/ajg.2012.251.
- Zwijnenberg, Robert. "A Two-headed Zebrafish." *Moebius Journal* 1/1 (Dec 12, 2012):1-14, accessed February 21, 2014, <http://moebiusjournal.org/pubs/14>.
- Zwijnenberg, Robert. "Biotechnology, Human Dignity and the Importance of Art." *Teoria* No. 1(2014):131-148.
- Zwijnenberg, Robert. "Preface. Art, the Life Science, and the Humanities: In Search of a Relationship." In Ingeborg Reichle, *Art in the Age of Technoscience: Genetic Engineering, Robotics, and Artificial Life in Contemporary Art*. Translated by Gloria Custance, xv-xxxii. Wien/New York: Springer Vienna Architecture, 2009.
- Zwijnenberg, Robert. "Stranger Connections. On Xenotransfusion and Art." In *Institutional Critique to Hospitality: Bio Art Practice Now. A Critical Anthology*, edited by Assimina Kaniari, 129–38. Athens: Grigori Publications [Εκδόσεις Γρηγόρη], Art History and Theory 5. 2017.
- Zylinska, Joanna. "Taking Responsibility for Life: Bioethics and Bioart." In *Ethics and the Arts*, edited by Paul Macneill, 191–200. Springer Netherlands, 2014. doi:10.1007/978-94-017-8816-8\_17.
- Zylinska, Joanna. *Bioethics in the Age of New Media*. Cambridge, MA: The MIT Press, 2009.
- Zylinska, Joanna. *Minimal Ethics for the Anthropocene*. University of Michigan Library: Open Humanities Press, 2014.

## Artists' and designers' web page

- Aniela Hoytink <http://neffa.nl/portfolio/mycotex/>;
- Art Orienté Objet, <http://aoo.free.fr/>;
- Elio Caccavale, <https://www.eliocaccavale.com/>;
- Jalila Essaïdi, <http://jalilaessaidi.com/>;
- Sonja Bäumel, <http://www.sonjabaeumel.at/>;
- Špela Petrič, <http://www.spelapetric.org/>;
- The Center for Genomic Gastronomy, <http://genomicgastronomy.com/>;
- The Microbiome Security Agency, <http://welcometothemsa.com/>;
- The Tissue Culture and Art Project, <http://lab.anhb.uwa.edu.au/tca/>.

## Movies, videos

- Laval-Jeantet, Marion. "May the Horse Live in Me." *Performance abstract*, accessed 7 July 2017, <https://www.youtube.com/watch?v=Awz4w22tFHw>.
- Laval-Jeantet, Marion. and Mangin, Benoit. "Prix Forum I Hybrid Art – Art Orienté Objet – EN – YouTube," accessed 9 September 2015, <https://www.youtube.com/watch?v=dxztkwiAJCY>.
- Przekładaniec* (Layer Cake). 1968. Poland. Directed by Andrzej Wajda. Screenplay by Stanisław Lem. With Bogumił Kobiela, Anna Prucnal, Jerry Zelnik. In Polish; 35 min.
- The Center for Genomic Gastronomy*. "Community Meat Lab Amsterdam." Vimeo, accessed 6 April 2016, <https://vimeo.com/50204650>.
- The Center for Genomic Gastronomy, Trailer – Zack and Cat*, 2012, accessed March 17, 2017, [https://www.youtube.com/watch?time\\_continue=1&v=7o6iQGHW-IE](https://www.youtube.com/watch?time_continue=1&v=7o6iQGHW-IE).
- Zaretsky, Adam. *DIY Embryology*, 2012, from "Deepspeed media," accessed 17 March 2017, <https://vimeo.com/51410231>.

## Websites, on-line data base

- Bio Art & Design Awards*. "Matter of Life," accessed 17 February 2017, <http://www.badaward.nl/matter-of-life/>.
- Biosolar Cells*. "Photosynthesis," accessed 23 June 2017, <http://www.biosolarcells.nl/en/zonne-energie/fotosynthese.html>.
- BiosolarCells*, accessed 9 February 2017, <http://www.biosolarcells.nl/en/home.html>.
- CDC Radiation Emergencies* | Radioisotope Brief: Cobalt-60 (Co-60), accessed 16 December 2015, <http://www.bt.cdc.gov/radiation/isotopes/cobalt.asp>.
- Edible Geography. Thinking Through Food*, accessed 24 March 2016, <http://www.ediblegeography.com/>.
- Encyclopedia Britannica*. "Cobalt-60. Chemical Isotope," accessed 16 December 2015, <http://www.britannica.com/science/cobalt-60>.
- Environmental Terminology Discovery Service*. EEA, accessed 25 November 2015, <http://glossary.pl.eea.europa.eu/>.
- European Environment Agency's Home Page*. Folder, accessed 3 June 2017, <https://www.eea.europa.eu>.
- Human Microbiome Project DACC*. "About the HMP," accessed 23 May 2016, <http://hmpdacc.org/overview/about.php>.

*Humanity+*. Philosophy, accessed 25 August 2017, <http://humanityplus.org/philosophy/philosophy-2/>

*Lacks Family Website*, accessed 21 May 2015, <http://www.lacksfamily.net/>.

Lewis, Charlton T. and Charles Short. *A Latin Dictionary*, online. <http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0059>.

LUMC “Nederlands Eerste Feces-Transplantatiebank Geopend in Het LUMC,” accessed 18 June 2016, <https://www.lumc.nl/over-het-lumc/nieuws/2016/februari/Nederlands-eerste-feces-transplantatiebank-geopend-in-het-LUMC/>.

*Oxford English Dictionary*. OED Online, Oxford University Press, <http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/3683>.

*Oxford Reference*, <http://www.oxfordreference.com/>.

*Trust Me, I'm an Artist*, accessed 18 June 2017, <http://trustmeimanartist.eu/events/>.

*University of Western Australia*, accessed 21 February 2014, <http://www.symbiotica.uwa.edu.au/>.

V2\_ *Institute for the Unstable Media*. “Test\_Lab: Art Meat Flesh.” Event, accessed 11 April 2016, [http://v2.nl/events/test\\_lab-art\\_meat\\_flesh](http://v2.nl/events/test_lab-art_meat_flesh).

# Samenvatting

## Lichamen Binnen Affect

Onze opvatting van het lichaam als passieve biologische materialiteit staat ter discussie sinds de opkomst van genetische-modificatietechnieken, stamcelonderzoek en weefselmanipulatie. Biotechnologisch onderzoek vertelt ons nu dat lichamen dood én levend kunnen zijn; ze kunnen menselijk en niet-menselijk zijn; meervoudig en toch één; of ze kunnen de volledige biologische informatie van een persoon bevatten en toch als commercieel object worden beschouwd. De manier waarop wij denken over lichamen, en hoe wij praktisch omgaan met lichamen, toont zich radicaal anders dan de manier waarop biotechnologische toepassingen met deze lichamen omgaan. In dit boek worden de voorwaarden van denken over, en omgaan met lichamen binnen *affect* onderzocht. Het voornaamste uitgangspunt bij dit onderzoek is dat lichamen bestaan uit veranderende en groeiende transformaties waarmee we geconfronteerd worden, als gevolg van, met name, manipulaties van lichamen door de levenswetenschappen.

De huidige biotechnologische werkwijzen die het lichaam manipuleren, tonen de noodzaak om de wederkerige relatie tussen de theorie en praktijk van levende lichamen te accepteren en te implementeren. Om greep te krijgen op de continuïteit van theorie en praktijk van lichamen, richt ik mij op het concept van affect zoals dat naar voren komt in de filosofie van Gilles Deleuze, met name in zijn interpretatie van Baruch Spinoza en Jakob von Uexküll. De notie van affect wordt gebruikt om de relationele, contaminerende materialiteiten van onze lichamen te begrijpen, en de term 'affect' confronteert ons met de feitelijke implicaties van het praktische omgaan met lichamen. Ik stel dat affect, als een transformatieve relationaliteit, teweeggebracht wordt door biokunstenaars en bio-ontwerpers die werken met levende lichamen als artistiek medium. Dat is de reden dat ik, door goed te kijken naar hoe kunstenaars de relationele capaciteiten van lichamen in hun werk gebruiken, zoek naar de voorwaarden om praktisch om te gaan met lichamen binnen

affect. Dit boek stelt dat gebruik maken van affect een andere logica van denken vereist, die materiële implicaties adresseert voor de manier waarop we niet alleen vandaag de dag het lichaam begrijpen, maar ook, en in het bijzonder, hoe we omgaan met lijfelijke en niet-lijfelijke lichamen binnen een breed socio-politiek en ethisch gebied.

Teneinde onze manier van denken over lichamen te veranderen wordt de notie van *contaminatie* gebruikt als een manier om relaties tussen meervoudige gebieden en standpunten te bestuderen en analyseren. Contaminatie staat niet in tegenstelling tot puurheid maar wordt gebruikt als de bevestiging van relaties van transformatie. Het boek is gestructureerd aan de hand van twee hoofdtrajecten: 1) de studie van de wijze waarop bio-kunst “conditionerende contaminaties” gebruikt, die ons in staat stelt de manieren van het praktisch omgaan met lichamen binnen affect in kaart te brengen; en 2) een incarnatie van dit in kaart brengen binnen *New Materialism* denken en de daaraan gerelateerde onderwerpen, die cruciaal zijn in de zoektocht naar de condities van het omgaan met lichamen binnen affect; dat wil zeggen, een behoefte aan menselijke en niet-menselijke egalitaire reciprociteit; een openheid naar het creëren van non-linguïstische vormen van betekenis; de notie van *agency* en subjectiviteit buiten het menselijke domein; de verantwoordelijkheid die voortvloeit uit een “materiële contaminatie” die vormgeeft aan theorie en praktijk. In beide trajecten van dit boek worden filosofische analyse, kunstontmoetingen en reflectie op de werkwijzen van levenswetenschappen gecombineerd. Tegelijkertijd worden ze ook ontwricht en gecombineerd door contaminanten.

Contaminanten ontwrichten ieder hoofdstuk en constitueren een drijvende kracht in termen van wat belangrijk is bij onze ontmoeting met de transformatieve relaties van lichamen. Door ontwrichting zijn contaminanten de verhalen van gedurfd transformaties die niet alleen lichamen doorkruisen, maar ook disciplines en perspectieven over lichamen. Toch komt elk verhaal wankelend naderbij, en wordt urgent en belangrijk voor het fantaseren van onze wederzijdse multilichamen, de lezer achterlatend met niet alleen een contaminerende manier van denken, maar ook met begrip van de noodzaak van deze manier van denken over het praktische omgaan met lichamen binnen affect.

# Curriculum Vitae

Agnieszka Anna Wołodźko was born in 1984 in Olsztyn, Poland. She is the granddaughter of Zofia, Leontyna, Czesław and Franciszek; the child of Jan and Jolanta, the wife of Paweł and the human of Dżeki and Kicia. Populated by many encounters, piano music in early life, poetry, forest and thousand lakes of Warmia and Mazury to immerse into philosophy, art, the flat, green landscapes and continuously moving skies.

In 2008, she received her MA in Philosophy from the University of Warmia and Mazury in Olsztyn (Poland), and, in 2012, an MA in the Philosophy of Art History from Leiden University (The Netherlands). She started her doctoral study at Leiden University in 2013. Since 2016, she has worked at the AKI teaching philosophy of art, lecturing in *BIOMATTERS*, an artistic research program that explores how to work with living matter. She also coordinates Biolab at the AKI. She was a member of organizing committee of the Sixth Annual Lowlands Deleuze Scholarship Conference “A Grin without a Cat” at the AKI Academy of Art and Design in Enschede in 17-18 May 2017; and an artistic curator and co-organizer of the workshop and symposium on Science-Frictions on 22 November 2017 at the DesignLab University Twente. Since 2017, she has been a lecturer at Leiden University teaching courses on posthumanism and intersection between art, ethics and biotechnology.

