AFFECT AS CONTAMINATION

Embodiment in Bioart and Biotechnology

AGNIESZKA ANNA WOŁODŹKO

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Affect as Contamination

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1

Introduction

Bodies within affect

We are bodies within contaminations – within mutating and growing relations of transformations. As bodies we are the assemblages of organic corporeality; chemical components; non-organic particles; animal, bacterial, viral, fungal bodies; thoughts; fears; beliefs; rituals and ideologies conditioned by technologies, histories, politics of signification and classification. We are already immersed in many contaminations, and we contaminate with each other, often in a risky relationality of transformation, sometimes joyfully, sometimes painfully, but mostly unpredictably. But despite this unstable and continually moving condition, we tend to enact bodies as if we were autonomous, as if our bodies had clear and certain borders. The vastness of implications of these tendencies to desire stability and purity of the body we have been witnessing during 'the pandemic of Covid-19, when we found ourselves in the life of sterilisation, surveillance, abuses of power, physical distancing'[1] all in the name of control of contamination, in the name of safety while allowing others to die. And yet, when we breathe, we continue to change, and when we meet, we transform each other into sometimes risky states. Transformations happen imperceptibly, they may be joyful but also fatal, nevertheless they condition who we become. When we eat, we not only give energy and nutrition to our body, but we become with the food we swallow. When we breathe, our lungs not only perform the involuntary movement that provides oxygen to our blood, but we become with the environment that breathes with us. When we tweak the DNA in our bodies, we not only change their 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.

Contaminations are thus not only these involuntary relationalities of bodies, the way of their being due to their material porosity, but also structurally persistent protocols within practices that strive for the manipulation of bodies and which as a result redefine and condition them. In particular, the vastness but

also schism between the desire for transformation and the need for its control is vivid in biotechnological practices. Here, thanks to new biotech tools, bodies may be dead and alive, may be multiple and yet one, may contain a person's entire biological information and yet be commodified. Gene editing, stem cell research and tissue engineering not only undermine our old understanding of what is a living body and what it can do but also accelerate its plasticity to the point of our inability to its recognition. What once was clearly considered as human and non-human, the organic and the inorganic, has now become blurred: think about human organs-on-chips, small devices resembling microcomputers but filled with human cells to mimic particular organ function, such as breathing lungs or beating heart.[2] Biotechnological practice seems thus to enable us to not only live within contamination but also practice it, by initiating and inventing ever-new forms of transformations. However, in the face of the newly discovered unbounded mutability, the old desires tend to get strengthened: in the name of scientific progress and biotechnological enhancement, bodies are turned not only to easily manipulated matter but also to a resource for economic profits and political gains. Our bodies became an artefact of 'cultural and technological processes'[3] that condition and determine bodies' life and death, health and function according to labour distribution and its governance. As an artefact, a body, rather than affirmed in its precariousness, is *precarisierd*[4] in order to be deliberately moulded and transformed into what is considered a norm and natural state. In other words, in the name of control, contamination as bodies' way of being that is precarious because prone to unpredictable and incalculable transformations, became a tool of governance and economic exploitation.

Therefore, often as a response to bioprospecting, social, political and medical injustice that help to group and classify bodies according to ideologies of sex, race and species, the need for a more egalitarian way of thinking and practising of our bodies emerged. The word 'affect' became thus to denote, above all, a particular onto-epistemological alternative, offering an image of the world that is based on embodied relationality, procesuality, fluidity and porosity of bodies and their connectivity beyond the hierarchical and essentialist classifications. Affect as a method of an encounter and way of thinking about bodies, as well as a phenomenon that expresses those bodies, has allowed to challenge, among others, the commodifying practices and assumptions of biotechnology that a body is just a passive and easily manipulable matter possible to be extracted from social, political and cultural significance. Since *The Affect Theory Reader*, the ground-breaking affect study book edited by Melissa Gregg and Gregory J. Seigworth,[5] affect grew into one of the major ideas influencing philosophy,

literature and cultural studies, with there being varying wide and often contradictory propositions of its reading and practice. Following Gregg and Seigworth's notion of affect as 'ethology of bodily capacities',[6] I argue in this book that it is now urgent to focus on how to affirm the unbounded and unstable relationality between our human-animal-plant-particles bodies that the word 'affect' implies. Relationality of bodies means that they are in a constant state of uncertainty and doubt; you never know what the particular encounters will bring, how they will influence you or other bodies. I argue therefore that if we want to affirm contamination that would escape the desire for its normalization into tools of risk management, we need to not only face the relationality that we already are but also the questions of how we can responsibly live within its precarity. Here therefore, while acknowledging that relationality, mutability and transformation of bodies are also used as a technology for economic, political and social governance, I propose to affirm and practice affect as contamination – as living within rather than controlling and disavowing from the risky relationality of transformations.

This book thus situates itself within the discussion on affect that responds to the critique of affect that draws upon Spinoza-Deleuze readings.[7] 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.[8] There, Massumi argues for a way of thinking and acting that is independent of linguistic signification. When he writes about the autonomy of affect as an openness to relations and as a dissimilation of function, he refers to the a-signification of affect, a concept introduced by Deleuze and Guattari.[9] 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, as creative and spontaneous, and having the capacity for transformation and change, affect generates new, non-linguistic meanings[10] that are not supported by a regime of cognitive semiotics grounded in the signifier/signified paradigm.[11] Nevertheless, because of the characterization of affect as an encounter and experience, affect has been criticized for its inability to confront social and political criticism.[12] It is sometimes assumed that when affect can only be experienced and not be identified, it remains outside meaningful discourse.[13] We can conclude from such claims, 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 vivid.

In this book, I follow thus Massumi, who stresses that 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 notion of the autonomy of

affect helps to understand how risking a radical openness to relations, rather than fixating on a particular set of structures, fosters the urgency to care before the implications of these relations. Even if some of the critical voices regarding the characteristic of affect are significant, their concerns mostly relate to methodological clarity, which ultimately supports the disciplinary purity and prioritization of one discipline over the other. What such evaluations miss, despite their crucial and urgent concern for the specificity of the humanities, is the contaminating condition of affect that not only blurs any stubbornly posed demands for purity but also calls for acknowledgement of a radical precarity that conditions bodies in their transformative relations.[14] In this book, I propose thus to map affect's condition of affirmation of the relational thinking within cultural and political theory, drawing possible ways not only for the transformative and relational logic of thinking with affect but also for learning what it takes to live with implications of affect. In this way, this book addresses questions of how the understanding of bodies is produced and how it can be practised when we ignore disciplinary divisions, when art, philosophy and science become continuously challenging, crosspollinating and contaminating each other.

Therefore, if the word 'affect' is to be used to describe the precarious because transformative relationality of bodies, we need to come to a more careful and thorough (which means acknowledging nuances and ambiguities rather than clarifications) understanding of the notion of affect and its implications for the way how we define and practice those bodies through encountering those bodies across and within art, philosophy and science. The concept of affect discussed in this book not only presents a possibility for change and affirmation of relationality of bodies but points also to tangible problems and risky relations that must be sensed beyond the disciplinary divisions that used to define them if we want to sustain that change. In *Affect as Contamination* I call for not only thinking with affect's relationality but also affirming living with the implications of its contaminations across disciplinary divisions, along multiple embodied encounters with artworks, bodies, thoughts and concepts. This book is thus not about bodies yet to come, but about bodies that already are, that demand recognition of implications they already live with so that change that stems from their practice can be possible.

Contamination as practice

Writing a book about the affirmation of contamination in a time when the global pandemic of Covid-19 caused so many to die seems irresponsible and ignorant at

the least. However, I propose to affirm this word in particular as it holds not only an affirmation of risk but also the possibility of creative resistance against forms of abuse and violence that might come with risk management. The historical function of the word 'contamination' reveals this double character. While contamination has been positioned against ideas of purity, clarity or objectivity, it has been also a fuel of creativity. In that sense, because of its double and precarious characteristic, contamination becomes crucial for our understanding of affect. For instance, within the history of science, laboratory practices were based on the understanding of contamination as a threat to 'pure medium cultivation',[15] and therefore the principle to control conditions was universal. Contamination was juxtaposed not only with the sense of purity of and certainty about scientific findings but also with the sense of autonomy and rationality of practising 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,[16] argued that, as relational and contingent, contamination was a conceptual tool for understanding how our knowledge works.[17] 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,'[18] contamination denotes not only destruction but also construction by multiplication. Contamination may lead to the creation of new relations and new bodies, as well as new ideas about those bodies. However, the fear of destruction that contamination may also entail 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'.[19] 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'.[20] The pursuit of purity as an armour against contamination has been thus strengthened by the fear of losing control, losing the power and position within knowledge-making practices and their institutionalization. Recently, however, the second logic that contaminations foster gains more resonance. Rather than denoting a threat to the 'purity' of disciplines, their methods and findings, contamination became understood as a call for their creation by multiplication.

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'.[21] As an extension of Latour's belief that 'we have never been modern',[22] Shotwell argues that 'we have never been pure'.[23] 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.'[24] 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'.[25] 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.[26] 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.[27] I therefore use the word 'contamination' not only to think with affect and its implications but also 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 – it is a way of being of bodies and, therefore, it demands an equally contaminating way of its practice. Contamination understood as a relation reflects risk because of the vulnerable and unpredictable character of changes that bodies are conditioned by. Contamination as practice that means attentiveness to the implications of these relations, demands thus sensitivity and capacity to respond in a careful way to this risk so that relations of transformations may continue, so that bodies conditioned by this relation may flourish. Contamination becomes in this way an affirmation of relations of transformation where tension and change are not just inscribed into the embodiment but sustained beyond the power that desires to govern them.

The understanding of affect as contamination thus positions our bodies in a state of confrontation with the risk and implication of relations. The contaminating character of affect fosters new challenges and risks. Bodies conditioned by affect might be destroyed, changed, multiplied. Contamination as such, rather than being opposite to purity, becomes a way against ideologies and practices that mitigate and manage the risk according to given assumptions of who deserves to live, to mutate and to change and in what way. Contamination understood along and as affect offers a conceptualization of bodies within a constant state of risk but not in order to induce new modes of control and management, but rather as a possibility of thinking with the change and transformation as an open process of responding and caring before the mutations. We become contagions of becoming, transemiotic GMOs that need to learn how to think

with contamination so that we can further multiply and move, rather than remain in the state of power relations that strive for normalization of change according to what is already defined as a norm, natural, healthy and pure. In this way, living within affect as contamination does not offer a clear view of what is a body, how it should be changed and what is a safe way to do so. Affect as contamination demands rather facing the radical risk of not knowing and yet encountering bodies within the precarity that conditions them. Sustaining the risk, diffractions and tensions between encountering bodies, species and even disciplines, as this book will demonstrate, becomes a challenge of thinking and living within affect.

Importantly, bodies within affect as contamination 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. Affect as contamination calls 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, affect generates questions of responsibility before the contaminations. The contaminating relationality of affect expresses messiness and risk that, rather than something to be avoided and managed, needs to be confronted and lived with. *Affect as Contamination* is about living with transformations but not affirming pollution, mutilations or sickness it may cause; it is not about quick control by fixation and categorization according to what we think is better. In order to think about embodiment, the notion of contamination becomes thus not only a conceptual tool for visualizing relational and mutually transformative materialities but also a way of writing and thinking through their implications. Here, contamination as a tool of thinking, but also as a way of being is not only relevant but also urgent because it offers non-generic ways of practising bodies allowing for transformative processes to occur and to be sustained.

Therefore, contamination as a philosophical concept and as a way of being, with its transformative relationality, forms the structure of this book. In other words, contamination becomes a way of accessing and understanding what embodiment as practice entails. Each chapter begins with an encounter with a contaminant, be it blood, air, food, faeces, bacteria, organs, multispecies, plants, plastic particles or chemicals, that although constructs its own story and provides its own narration, penetrates and contaminates further understandings. These contaminants that disrupt each chapter are the personal and embodied stories of often risky relationality, revealing murkiness of academic reflections and implications of what is at stake when practising contamination.

Since contamination that changes or modulates bodies is hardly a safe phenomenon, this sense of risk and tension is kept in the encounter of reading. Therefore, the reader will find herself investigating bodies within affect through two main trajectories. 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' contaminations. By contrast, the second trajectory has a scholarly and non-personal tone. Sometimes, these trajectories are entirely separate, at others they intermingle, not only producing 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 affect. Contamination, as both a concept and a way of practice, allows avoiding a linear approach to discussing embodiment. In this way, practising embodiment within affect as contamination calls for the urgency of a different perspective, one that fosters material sensitivities that would respond and care for our contaminated and contaminating bodies. Affect as contamination calls for slowing down in order to learn how to care and what that care would mean for the multiple bodies that we have become.

Contamination as movement

The point of entrance into *Affect as Contamination* not only as a mode of reading but also as a way of practice has a character of movement of a body rather than its state. It is a lesson I have taken from Donna Haraway's plea for 'staying with the trouble'[28] that demands facing the mess we find our human and non-human bodies to be in. After Isabelle Stengers' 'manifesto for slow science' that calls for 'reweaving the bounds of interdependency',[29] we have our point of no return – we need to get ourselves dirty to be able to feel and respond to the consequences of the mess and that demands different speed. Rather than thus counting and mourning losses or planning grand and spectacular forms of repair, affect as contamination picks up the challenge that Haraway and Stengers pointed to, that is very mundane, almost obvious in its simplicity, yet is the most difficult. The difficulty of the task to slow down and stay in the mess lies exactly in the very materiality, wetness and stickiness of the problem, it involves the labour of paying attention to details, to complex relationalities and independencies that our bodies rely upon. Staying with the trouble, not resolving things into fast fixes but sitting on them, waiting while stirring the pot, becomes the most difficult of tasks.

Nevertheless, in the face of (bio)technological promises that speed up every innovation by unifying its problems into the equation of progress, feeding us with fast and 'smart' solutions, the ability to slow down, to stay embodied and make yourself feel the frictions and transformations they cause seems almost impossible. We do not know how to slow down, how to rub ourselves with the multiple and complex implications, or expose ourselves to the vulnerability of not knowing, of not having the control. We do not know how to do this, because we, in the humanities of Western mindset, are taught about the nobility of rational thought, that rationality alone can change societies, build cultures, construct politics, and invent tools. But when the unapologetic complexity of life hits us hard in the guts, revealing this is not a matter of thought alone, it is a material act, one that disturbs and makes things awkwardly intimate because close and urgent, we need to acknowledge rather than disavow from the pain, risk and contaminations we are in. To practice affect as contamination, to slow down, to make yourself vulnerable before implications becomes an act of creation – an act of unapologetic and consequential practice of our bodies. This is this book's way of reading and pursuit; it is relentless, because at stake are our human and more than human bodies unbounded, uncontained by the dominant regime of beauty, progress and medical health, behind which the desires of commodification creep in. If we are to live as bodies we already are, constantly contaminating, mutating and in multiple complex interdependencies with each other, we need not only recognition but ways of consequential practice so that the mutating process can be sustained and not subsumed by the machine of capitalist desires for profit and control.

I thus follow threads woven before me, in particular in the philosophies of Baruch Spinoza and Gilles Deleuze that mapped what is affect, threads of Haraway and Stengers that made many pots for us to cook in and many spoons to stir with, and threads of art and artists that make recipes, that cook bodies and experiment with tastes, that foster and expose risky relationality in a way that implications and complexities of living and practising bodies within affect become the marking point of no return. This book is thus not about answers; it will not give you comfortable positions where things become clearer. What I am after when practising bodies within affect as contamination in the time of many crises and biotechnological speed of innovations and manipulations of bodies are the complexities and implications from which the strategies and ways of slowing down may emerge. This book, in this way, becomes a risky endeavour; it will betray many masters and it will create many relationships and unlikely alliances because at stake is to stay in the mud and yet rise.

In the face of the question of how we can live with contaminating encounters, and in what way we might through affect actually create and care for bodies rather than destroy them by fixation and commodification, we need to unfix and multiply methods of thinking and practice. We need not only calls for a meaningfulness of a non-generic way that would point to risk and doubt of an encounter but also examples and recipes of its practice. This book proposes practices of learning the art of slowing down through the stories of encounters with what has been called bioart, art that works with living matter, often using the tools of biotechnology and life science.[30] Robert Mitchell famously argued that bioart, or what he calls vitalist bioart,[31] not only creates conditions for affect but also prolongs those affects: 'bioartworks [. . .] seek to extend the experience of affect rather than allowing it to resolve into situated perceptions and cognitions.'[32] 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, or name themselves bioartists. These artists, who work with living matters, tend to create risky encounters that directly touch upon the questions of what is life, how much are we going to enhance and manipulate our bodies, who has the right to do so and who decides how. Through engagement with these questions, using different tools and methods that betray disciplines and comfortable boundaries, these artists get their hands wet; they do not disavow from being implicated in the manipulation of living bodies, of controlling and deciding who lives and who dies. Unlike the institutionally protected scientist and academics, these artists, through exposing their implication in living bodies manipulations and transformations, make onto-epistemo-ethical claims where politics, economy, philosophy, aesthetics, science and ecology are always already interwoven in each other when it comes to embodiment, that is practising our living bodies. They thus make tangible how practising affect as contamination involves not only thinking about affect as relation but also attentiveness and care in the face of these relations implications. Practising affect involves attentiveness into how much, despite the risks, the conditioning of their relationality is important. Here, bioart practice becomes thus a guiding thread. Through studying bioart's practice of conditioning relations of contamination we not only slow down to understand the possibility of living and thinking with affect but also encounter its implications. By engaging with how art that already works with manipulations and contamination of living bodies conditions thinking and the practice of the relations of transformation, we can grasp what affect is and how we can practice it. Rather than juxtaposing the

fields of science, art and philosophy and comparing and illustrating arguments about their multiple perspectives, I propose to consider analysed bioart works in this book as contaminating encounters between these fields.

Bioart's contamination

The tension between art, science and philosophy was of particular interest to Gilles Deleuze and Félix Guattari for whom all three constitute and define thought: 'the three thoughts intersect and intertwine but without synthesis or identification.'[33] 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';[34] 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'.[35] Preservation does not fix things or capture them in their instability. On the contrary, art preserves that which cannot be captured, that is what belongs to a moment but not to identities and particular bodies. What art preserves 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. By studying the particular methods of art's preservation of affect we can come closer to understanding the vast implications of affect.

Following Deleuze, we can consider art to not only work according to affect, that is according to the relational and transformative way of being of bodies, but to produce new affects, new relations of contaminations. Nevertheless, in this book, I have deliberately selected bioart works that undertake in its practice 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.[36] Moreover, the relation between art and living 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;[37] in literature, affect regarded

the transformation of a sign;[38] in painting – transformation of line and colour;[39] in music – transformation of refrain.[40] 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,[41] I would argue that the imagination and approach of today's art with respect to bodily modulations and contaminations gain 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. They 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.[42] This practice of transformation in bioart directly touches the relations and contaminations of bodies. Also known as transgenic art or wet art, it is about the transformation of what we understand by life and living bodies. Bioart, as Marietta Radomska argues, exposes life as uncontainable by drawing 'attention to excess, procesuality and multiplicity at the very core of life itself'.[43] In other words, bioart becomes conditioning practice of how to contaminate and be contaminated by.

Bioart engages with biotechnological tools and practices, it can employ living bodies and materials such as plants, animals, body parts, cells, tissue, bacteria or DNA as art's expressive medium.[44] By definition, then, bioart marks a break with clear-cut boundaries. By working 'on the level of an actual intervention into living systems',[45] bioart can not only blur 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 can also make 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 and provide references and actualizations of affect in the state of things,[46] 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.[47] In this sense, the most interesting question when encountering the phenomenon of bioart is not about its character

and definition, that is whether it is art, bioart or simply 'bad science', and how it should be treated; rather, it is what bioart actually does when dealing with living bodies.[48] That is, how does bioart work with contaminations of affect – how does it practice embodiment that affect as contamination implies?

Bioartists consistently appear to begin with the Spinozian question of what the body can do. Adopting this experimental approach to what is possible, rather than constructing a reflective image of the given, 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 configurations 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 given identities and their comparison with regard to linear understanding of time and space. As Rick Dolphijn and Iris van der Tuin argue, 'new' is rather focused on the multiple relations that are at work; thus, *new* refers to now, that is to 'this very moment',[49] that relations of contaminations imply. The *new*, as Dolphijn and Van der Tuin stipulate, indicates the continuous rewriting of the now.[50] Hence, 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 contaminating encounters.

A famous bioart formation that experiments with biotechnological body manipulations and their implications for wider social, political and ontological problems is the artist-run research laboratory, the *Tissue Culture and Art Project* (*TC&A*), created by Oron Catts and Ionat Zurr.[51] 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), the first tissue-engineered sculptures to be presented alive in a

gallery context; *Pig Wings* (2000–1), 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), 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* (2004–8), which involves the growing of living tissue into a leather-like coat-shaped form.[52]

In this book, the selected narrations of contaminants share the abovementioned 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, ask how we can practice those biotechnological bodies in their relationality, which biotechnology itself seems to fail to sustain. The work of bioartists reveals a speculatively pragmatic question of how to transform bodies in a way that does not result in the immediate universalization through the dialectics of negation of what is or should not be. Contaminants raise questions that emerge from a deeply affective understanding of how our bodies are and how they become; questions such as how to practice bodies within affect as contamination with care and responsibility that would enable producing new affects.

In the following chapters and contaminants, I 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 embodiment within affect: in other words, the conditions that allow art that works with living bodies to produce and create spaces where affect as contamination can be generated and prolonged. Such an approach implies treating the bioart's contaminants discussed in this book as documents and narratives of these practices.

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 bodies involved in it. As such, the notion of documentation would be intertwined with the problems of how to represent artworks while avoiding the logic of representation. 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 Groys, 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.[53]

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 Groys, bioart's capacity to bring to life what has never been in the context of living bodies makes it intrinsically caught up within biopolitics.[54] I will argue, however, that bioart's transformative approach to living matter overcomes even the biopolitical struggle to categorize the natural and artificial. These transformative capacities seem to be one of the conditions of bodies within affect and, indeed, what it actually means to think with affect as contamination.

In this book, I presuppose the epistemic notion of art, which allows taking particular contaminants as being reliable and insightful practices of the generation of meaning regarding living matters today. Ultimately, this will lead us 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 not only deals with these contaminations but also becomes contaminant itself, this book maps the conditions of practising embodiment that affect implies.

Contaminant P like a patent for cancer

Affect is not a happy touchy feeling, at least not only; it is a contamination zone within which we already are. When captured into old hierarchies, affect becomes a powerful tool of control and hierarchization that we all become subordinated to. 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*].[55] 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.[56] However, as

Dickenson states, recent biotechnological practices undermine the boundaries between what can be considered as a person and what is just a raw body part, which results in 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 is seen within the phenomenon of human genome patenting and genetic testing, the most lucrative applications of biotechnological innovations.[57]

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.[58] This resulted in an enormous biomarket, where, starting from 1980s till 2005, over 20 per cent of the human genome was patented in the United States.[59] 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',[60] and so, in this context, its function presupposes that parts of our own body are legally owned by companies and institutions.[61] 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 is 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 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 ever since 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 BRCA2 – 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.'[62] 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 is made in a lab with an enzyme that creates DNA from RNA template'.[63] Deemed as not naturally occurring, and structurally and functionally different from DNA, cDNA thus complies with the patent law. Nevertheless, cDNA is initially isolated from a retrovirus which 'naturally' produces it. Some critics argue that, despite its structural and functional difference, which allows for

further research, the copy (cDNA) still holds exactly the same information as the original (DNA),[64] making the law allowing patents on cDNA because of its ascribed 'artificiality' false. 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.[65]

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 practised as autonomous and fixed identities, independent from collective relations.[66] As Dickenson argues, personalized medicine deliberately positions itself against *we medicine*, emphasizing 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' 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).[67] 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'.[68] In other words, to be accurate, any medicine depends on a range 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. Therefore, even though medical practice has exposed how 'me' medicine has already been 'we' medicine, this interdependence has become veiled by the abstract categories of individuality and autonomy enforced by the medical industry. In other words, while living bodies are conditioned by multiple dependencies between each other, we have failed to have changed the logic of not only how we understand what embodiment is, but also how to practice it within social and economic relationality. Such

negligence of acknowledgement of transformative relationality as a policy of practice in various socio-economic and medical spheres causes strengthening inequalities, and enforcing hierarchies that emerged through unequally distributed transformations.

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 publicizing 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, caused less accurate medical care.[69] What is more, 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.[70]

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 the perpetuation of the conviction 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 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 practices surrounding the management and care of bodies have 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 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 our bodies

under its law. Once you have 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, social, cultural, economic and medical 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. Today, we already live in the age of biobanks as the capital of the biotech regime rooted in the paradigm of bioprospecting and commodification of bodies into cell lines such as HeLa – the first cell line. HeLa cells' name is an abbreviation of Henrietta Lacks, a Black woman who died in 1951 of cervical cancer and whose cancer cells were taken from her body without her and her family's knowledge. The first cell line that gave rise to over ten thousand patents, which have been used extensively in medicine and research ever since, was a result of bioprospecting and experimentation practice commonly performed on poor, non-white female bodies.[71] The biobanks accommodate the promises of regenerative medicine via the accumulation of new methods such as those that transform a cell from an adult body into any other type of a cell, and CRISPR genome editing, which made the futurist idea of designer babies not only a scientific possibility but also institutionalized power play.[72] Indeed, these new biotechnological inventions have undermined any doubt about the influence that biotechnology already has in shaping our lives, and how they are all sustained by the logic of commodification, ownership and rights over who owns a body. Biotechnological promises disavow from the inequality for access and use of transformation of bodies, which is a political and economic powerplay leading to strengthening existing norms about who has the right to have rights over once body, and how these rights are implemented further.

Biotech and its regimes cannot thus be the concern of just bioethical committees and political policies. As Tina Stevens and Stuart Newman mapped, we cannot rely on bioethical committees and academic researchers, as they are often funded by the very companies they are hired to govern.[73] Biotech and the bodies they produce directly touch the multiple political, social and cultural realms of our existence – we become those bodies. 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,[74] but which, in turn, strengthens genetic determinism, as Steven and Newman pointed out. It is the 'genetic determinism [that] has been a ubiquitous, false paradigm prevalent since the onset of biotechnology and biotech patenting'.[75] As Robert Zwijnenberg explains, 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, that is 'who and what do we want to be as humans, and who and what do we want to become?'[76]

Biotechnological innovations that allow us to manipulate our bodies construct economic-social realities that further deepen divisions between those bodies on the basis of imposed essentialist hierarchy. Economic and political demands shaped by racial and sexist ideologies are strongly entangled with how scientific findings are made and how they are implemented which, in turn, inevitably influence social and cultural, individual and the population's practices, and power relations our bodies are conditioned by. As the Myriad case shows, once these multiple entanglements are applied according to the beliefs in autonomy, individuation and personalization, whose response to the contaminating nature of phenomena is by its governance and commodification, we enter into the realm of utopian beliefs in purity and clear-cut boundaries between bodies defined and classified according to ideas of race, sex, species, nation and class. For instance, transhumanists' desire for designer babies and perfect humans,[77] fuelled by an unquestioning use of technology to manipulate and transform bodies, 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 what a body should be like. We already live within affect as contamination, that is why, if we do not think and act according to the implication of its dynamic nature, we create even sharper dualisms, polarizations and hierarchies between bodies. Contamination has a capacity for destabilization, decentralization of hierarchies of bodies, but when framed as a tool of commodification and fixation into a given state, it strengthens what Neel Ahuja identified as a biopolitical regime of capitalist necropolitics that 'is not simply about the distribution of death and precarity; it is also about the accumulation of social and economic capital through the deadly body'.[78] It is therefore time to map these material and relational ways of understanding. It is time to map implications of affect for the notion of embodied practice it entails, in order to meet the challenges of the biotechnological present. The question is, how to do that? How can we practice the contaminating nature of our bodies? In other words, how do we make affect as contamination matter?

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 in 2014, I was then a PhD student of Zwijnenberg. The course 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 baptize chicken egg embryos, following a protocol of 'windowing', as is practised in developmental study. Chapple explained that the embryos never reach their adult stage and so it might be a humanitarian act to baptize 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 relations 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 once I could see and touch, once I was the one who held responsibility upon their life, their mutation with my own bare hands. I was overwhelmed by the sense of powerlessness I felt when dealing with the issue of body manipulation. I thought I will be 'untouched', and I believed my knowledge, assumption and reasoning are far from any metaphysical dogmatisms.

The usual procedure for windowing an egg involves making a hole 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 per cent humidity. Before an egg can be windowed, it must be sterilized using 70 per cent ethanol. You carefully make a cut in the egg shell following the given instructions about the size, angle and pressure necessary to make an opening (Figure 1). After your study, you must close the shell with plastic tape and return the egg to the incubator.[79]

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 careful precision and accuracy, and felt proud to have carried out the procedure successfully. Everything changed, however, when we 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. I saw students

Figure 1 Windowed egg with an embryo, 2014. Photo by A. A. Wołodźko.

of law, art history, literature and philosophy wearing white coats that seemed to shield them from any moral judgement, 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, some 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 taking 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 baptizing the windowed egg served no purpose in terms of developmental learning and was 'just some' artistic project, it had thus no pedagogical or scientific value that she thought would be relevant here.

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 the aim was 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 2). 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, despite my position of questioning any neovitalism ideologies that, as Rosi Braidotti pointed, lead to politics of pro-life fascism,[80] 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.

Figure 2 Embryo from windowed egg, kitchen experiment, 2014. Photo by A. A. Wołodźko.

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 anthropomorphizing; my morality was anthropocentric. Only then did I understand a little better what Boo Chapple had tried to show us.

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 not only to experiment with other perspectives, contaminations and their challenges but also to position ourselves within the implications they create. 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 disciplinary divisions, their context, material tools and methods for granted, instead of inquiring about what their implications and roles are 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 – in other words, we do not know how to live and act within affect. Instead of following fixed rules and established methods when studying bodies within affect, within relations of contamination, there seems to be an urgent need to implement affect as contamination as a valid material understanding. In the method, there is ascribed presupposition of knowing the implications in advance, of having a clear prediction of the results which allows for their application for more than one phenomenon. However, when you do not know what bodies can do, and therefore, do not know how to anticipate the implications of transformation they embody, there is a need for a way that would materialize and condition this

epistemological precarity. This need results thus 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 the consequences of such choices.

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?'[81] In her analyses of the body in contemporary medical practice, she moves from epistemology, which is concerned with 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.'[82] 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, Mol points that knowledge is a matter of ontology understood as practice and enactment, rather than representation and truth. Affirming knowledge as practice, affirms meaning to become uncertain, fragile, often volatile, and yet, equally important because contaminating and therefore shaping our bodies.

During Zwijnenberg's classes, I have understood what learning with doubt because of contamination might entail. Rather than discrediting meanings due to their epistemologically uncertain nature, students were forced to confront the question of how to take them 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.'[83] Donna Haraway defined this volatile notion of meaning of bodies within the frame of situated knowledge. By transforming the traditional idea of objectivity, based on Thomas Aquinas' corresponding notion of truth and the idea of disengagement of the subject from the object of study, she brought into importance a 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.'[84] Partiality, unlike relativity, which, she argued, is only a mirror of the representational idea of truth, is grounded in responsibility and care. A situated approach to knowledge, as Haraway taught us, demands thus 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'.[85] As practised 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 not only human but also non-human multiple agencies. The search for understanding of the body is risky because contaminating relationality merges in this way with logic that, 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 the main focus of humanistic concerns.[86] 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.[87] 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.[88] This means that, rather than understanding living bodies in terms of fixed properties, bodies need to be practised 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.[89] It calls for a readdressing of the question of knowledge production as already a problem of ontological and ethical character, where meaning can be a result of relational, ethological and shared process of contamination beyond power relations of anthropocentrism. Because of that relational focus on meaning production, Jakob von Uexküll's notion of *umwelt* and understanding of meaning production in the animal world has received much attention recently. 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[90] 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; and as such, new materialism becomes a starting point when thinking about contamination.

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 homogenously connected, affect as contamination implies thinking that connections are everything – the precarity of each relation, not their given safety, conditions our bodies. The logic that oscillates towards universalization of relation as means of overcoming anthropocentrism and exclusion of carnal forms of knowing, paradoxically, exercises the very promises it claims to overcome. As Neel Ahuja argues, the politics that shaped racial and feminized bodies as the outside of the rational, enlightened male body, are deemed to be overcome by the inclusion through the generalization by means of 'networks, systems, complexity, assemblage, and vitality that work through the affectable matter of bodies carry ambivalent traces of colonial subject and settlement fashioning that extracted the figure of the human from immanent ecologies of transcolonial production and consumption'.[91] There are thus ethical, ecological and political consequences to such a position that focuses on particular relations rather than the universality of interconnectedness. Just like ecology does not start with a radical openness to everything,[92] so does thinking with affect as contamination calls for 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.

As Joanna Zylinska noticed, because we are all entangled there is a requirement of responsibility.[93] This responsibility due to entanglements can be, however, subsumed by the desire to control this precarious relationality through organization and capture into safe because of fixed interdependency. For Alexander R. Galloway and Eugene Thacker the idea of connectivity can be framed, for instance, into the logic of network as 'a new management style, a new physics of organization that is real as pyramidal hierarchy'.[94] A network, as a system of interconnectivity, is always ruled by protocols – immanent expressions of control. When uncritically applied into the study and practice of living bodies, the logic of network transforms those bodies into an easy instrumentalized components of the fixed whole. In this way, biotechnology found an easy route through the ethical committees, for instance, since, 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 and govern within the framework of bioentrepreneurship. The pursuit of a quick application that is characteristic to bioentrepreneurship tends to equalize bodies with data, ignoring, disavowing and simplifying the complexities and situatedness that conditions these bodies differently.[95] As Stevens and Newman argued, 'biotechnology is not simply science. It is science in application'.[96] When this complexity of life can be translated into a code with the desire of its universalization, the promises of application become quickly monetized into predictable and certain profits, as the earlier example of gene patents showed.

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 not only gain 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 practising affect that we create and are created by. For this reason, *Affect as Contamination* adopts 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'.[97]

The scope of this book does not allow me to do justice to the nuances and complexity of the material semiotics that grew from the material feminist theories of such scholars as Rosi Braidotti, Donna Haraway, Jane Benett, Karen Barad and Stacy Alaimo.[98] My reading of their work thus focuses on those aspects of new materialism that are important for understanding the implications of practising affect as contamination, namely: a need for a critical redefinition of relational practice of bodies (Chapter 2); a pursuit of the creation of the non-linguistic forms of meaning (Chapter 3); the rethinking of the biopolitics governing living bodies and identities (Chapter 4); the awareness of a 'material contamination', where meaning is inseparable from matter, therefore each encounter becomes intrinsically ethical (Chapter 5).

The various influences and points of reference of new materialism have created a powerful conceptual basis for thinking about bodies within affect as contamination. This book is not only a continuation but also a contamination

of new material thought and its struggle to find new methodologies and their implications for how to practice embodiment. The main questions of this book will be analysed here with regard to how to practice the material way of thinking within affect as contamination. The main entry point for this book is the tension between three unlikely friends that deal with contaminating matters: art, science and philosophy. The following chapters construct points of meetings, alliances and relationships that are driven by disrupting contaminants.

Chapter 2, which begins with *Contaminant B*, discusses the notion of affect as human and non-human reciprocity. In particular, it examines how bioart's experimentations with human-non-human body relationality determine our understanding of what this relation is and what it does. I will discuss how something like a new body can emerge within the multiple relations of transformations. By analysing how artists can use an experiment as an event of multispecies relationality and contamination, I will map the implications and conditions of affect as contamination. 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 discus: how affect may be seen as a relation that can generate bodies and what kind of bodies emerge as a result of this relation. Chapter 2 seeks thus to also outline the misuse and misreading of affect by bringing its complexity through a more detailed study of affect in Spinoza and Deleuze.

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, through studying the encounter with the *Contaminant T*, I 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 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 do not imply that we must make choices about what to exclude, that is between what makes sense and what does not. By focusing on theories from Uexküll and biosemiotics, where affect is analysed as the capacity of non-human living bodies, I will thus discuss the implications of meaning when it is interwoven with different ways of making sense. Following Deleuze, I will map further the conditions of making sense within affect that rather than driven by truths demand a different friend.

In Chapter 4, influenced by *Contaminant O*, I ask about the implications of fostering bodies multiple and dynamic agencies once the understanding of bodies' 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.[99] 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 and selves that are beyond the logic of fixed identities and yet materially important as nomadic.[100] 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. In Chapter 4, I therefore study the arguments of Haraway and Roberto Esposito in order to map what is at stake when conditioning the multibody's politics, how relations of alliance may be formed in such a risky and fluid agency that affect implies. Can we talk about any form of identity or persons within affect? Here I will confront the inevitably pragmatic question of how thinking about multibodies within affect demands dynamic practices and the politics of the multiple.

The final chapter initiated by the *Contaminant V* discusses the *Ethics of Contamination*. It 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 affect as contamination becomes here risky because it unequally distributes transformations, yet close because it is both urgent and important for our mutual multibodies.

2

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. 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 deprived of 'bulky cells such as red blood cells, white blood cells, macrophages, etc.' What Laval-Jeantet claimed to inject was 'the plasma, which contains hormones, lipids, and several kinds of proteins (immunoglobulins, cytokines, etc.) among other things'.[1] However, the extraction and apparent purification of horse's blood from substances harmful to humans did not mean the performance had been considered 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.[2]

The final performance of Laval-Jeantet injecting the horse blood plasma 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, 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's 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.[3]

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, however, quickly coagulated, revealing the invasive result of this meeting. Nevertheless, this captured in the container process of contamination became a sort of a relic of the performance.[4]

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 seems to remain 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 of a relational way of becoming. The expression of relationality in the form of a meeting of two distinct bodies was, however, far from neutral. Art Orienté Objet's experiment exposed what I call affect's relationality as a risky form of transformation and what they formulated as 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. 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. Affect as contamination concerns thus the conditions in which bodies, through their deviations and transformations, create each other, anew.

Experiment within affect

Bodies within affect, within risky relationality of contamination, are bounded to experimentation – to the risk of not knowing yet trying. But what does it actually mean to try? What is at stake when bodies meet and experiment with their relationality, with their capacities? Most importantly, how not to endanger each other in the act of experimentation by generalization or negligence, how not to pose your own idea and desires in the process and allow bodies to relate, without the need of appropriation and adjustment to an already given idea? These are the questions we need to ask in our search for the implications and consequences of affect so that we can condition and enable the continuation of its practice. If we are to practice affect as contamination, where bodies transform and mutate in a way that would allow for their creativity and capacities to flourish, however, we need to understand what are the risks and possibilities when bodies experiment and how the condition of distribution of agency of the one who can experiment is practised.

Experiment, as a method and a tool, has already a long and non-linear history within natural philosophy, science and medicine.[5] 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.[6] 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, to test a hypothesis, or establish or illustrate some known truth.'[7] 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'.[8] 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 recognized as meaningful. The problem starts, however, when we take this 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.'[9] Can the condition of affect as contamination be created through such understood experimentation?

The *Contaminant B* of the performance of 'May the horse live in me' seems to provide arguments and ways for practising experimentation but it also implicitly reveals the risks. Between experimentation as means of demonstration and capture and experimentation as a condition of encounter and transformation seems to be a thin line. Robert Zwijnenberg argues, when writing about the AOO's performance, that 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.'[10] It was the belief that blood has transformative capacities that could enhance and improve the health of humans that perpetuated the practice. In this way, it might be that the experimentation of AOO was to capture the forces of another body, rather than to encounter it through transformation.

Unlike, however, the historical practice of xenotransfusion, AOO's performance was not about being more human or acquiring a healthier body. As Zwijnenberg analyses it, 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'.[11] 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'.[12] This 'try out' renders the etymological roots of the verb 'to experiment', which in Latin – *experīrī* – means 'to try'.[13]

Nevertheless, there are particular risks and implications of the pursuit to try, to experiment. 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:

> 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.[14]

Here, thus, the transformation would be about harvesting the capacities of a body perceived as radically different. Experimentation becomes here an enactment of the anthropocentric and colonial mindset that reverberates in the transhumanist pursuit of becoming more at the expense of marking the essentialist difference and hierarchy between bodies. Finally, the very distribution of the agency in the performance on whose body is under experiment and who monitors the whole process of transfusion does not only concern the human and animal power relation but also gender. It is Marion Laval-Jeantet who injects into her body animal blood and Benoît Mangin who monitors it in the white coat, enacting the enlightening idea of equalizing a female body with that of an animal thus closer to 'nature' and male body with a disattached observer that is the rational Anthropos. As Mel Y. Chen argues when writing about the use of animal in theory and culture rooted in Enlightenment, 'under certain circumstances, the animal itself becomes sexuality, to the extent that the biological material of nonhuman animals (including but not limited to DNA) is used in human directed reproductive research such as stem cell technology and that animal by-products and hormones are used to increase human sex drives'.[15] In other words, if the AOO experiment is to transform 'bearded science' in a way that would not repeat the logic of identification and hierarchy, it must not so much break this old logic and categories, but create new ones.

Such a creative practice of experimentation can be reached by embedding the notion of the partiality of the observer. Within the experiment, the participating bodies may become partial in a sense that no one is positioned as the autonomous, objective performer. 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 experiment that foregrounds what can be understood by affect and its implications.

Partiality embodied in an experiment means that there are no subjects or objects that would belong to this experiment, that would determine its aims and results alone. Nor is there any experiment that would belong to the particular object and subject alone. 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 contamination rather than identification. Within an experiment conditioned by partiality, as observer finds herself in 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'.[16] 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',[17] rather, the partiality of the observer constitutes the occurrence of the experimentation – the partiality itself as it happens.[18]

Experimentation based on 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'.[19] 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.[20] Instead, while experimenting, we are mapping what is happening, we are sketching the conditions, creating maps of 'how to do' rather than 'what to do', so that new relations of contamination may be sustained in happening rather than captured: 'Seeing, seeing what happens, has always had a more essential importance than demonstrations.'[21]

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 different than truth sense of importance. Experimentation as such is a way of entering into the space of relations that are already in the middle, between and within bodies. As AOO in its performance practised, partiality

occurs between bodies, undermining any assumptions about their fixed and autonomous characteristic, exploring instead not only their porosity and fluidity but also tension and dynamics of their contaminations never separated from the situated complexity their bodies are conditioned by. 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.'[22]

Through experimentation conditioned by partiality, bodies can resist the principle of identification and order into fixed compositions. However, such resistance, as Isabelle Stengers puts it, 'does not mean to criticise or to denounce but to construct'.[23] When we practice affect as contamination through experimentation, we do not criticize the logic of identity, we do not denounce the dominant presupposition that humans desire to relate with other, as it was in the case of AOO, for instance, 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 bodies, which would demonstrate and identify, for instance, a moral position, we follow a different logic. Through experimentation and encounter, bodies become partial – they are foreigners, neighbours of their own multiple realms, they become exposed to their own vulnerability and porosity, they find themselves being complicit with the dynamic and often unequal redistribution of agency and responsibility. Such experimentation, an encounter with risky relations, becomes thus the necessity to resist identification in order to contaminate and be contaminated by. In this way, experimentation becomes a condition of creation. The creation of new relations of transformation becomes, in this way, a form of resistance that affect as contamination.

Contaminant S like the sacrifice of a pig

On 26 January 2017, a pastel pinkish image of the first human-pig embryo appeared in major newspapers and websites worldwide as well as scientific journals and online platforms. 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'.[24] Although in 2017 the procedure was still in its infancy, and only a few human cells have survived in a non-human body,[25] the discussion around the possibility of animal-human relationality has

been fierce,[26] and was quickly followed by a new hybrid creation as a human-sheep and human-monkey embryo in 2019.[27] In January 2022, the first successful transplantation of heart from a genetically modified pig to human body has been done, marking a radical change in xenotransplantation research and practice.[28] What is significant in the narrative of announcing these new biotechnological bodies is that 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 creature from Greek mythology, which has a lion's head, a goat's body and a serpent's tail. It was considered to have the most illogical body composition and, consequently, it was embraced with fascination and fear.[29] Similarly, a different Greek mythological figure such as Minotaur, with the body of a man and the 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 were an expression of wrongdoing, immoral behaviour or heresy.[30] 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',[31] rather than sustaining it.

Today, biotechnological chimeras have a soft pink colour and are accompanied by equally rose-coloured diagrams explaining the processes of transformation.[32] 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, that is 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 hybridization and its necessity if we – humans – want to lead a better and more 'sustainable' life.

Within the new biotechnological, biomedical practices, we are already what Donna Haraway in her *Cyborg Manifesto* calls cyborgs, chimeras that render the distinction between organic and inorganic, human and animal, irrelevant: 'the boundary between scientific and social reality is an optical illusion'. 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 and material reality.'[33] As such, the cyborg is 'committed to partiality,'[34] it is without resentment of the past, of the search for lost identity. Because through the biotech practice, we are already mutating cyborgs, rather than rejecting the technology, or blindly affirm its practices, the cyborg as us exposes not only epistemologies but also cultural and political capacity for change.[35] The cyborg becomes the persona of creative experimentation, embodying the continuous process of mutating and living in-between.

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 and 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 science can create them, but how to live when the boundaries are blurred. How to practice the human-non-human relationality that we have become? These questions hint at the implication of practising affect as contamination. They are the questions that result not only from acknowledging the relational and processual ways of being, of their interdependence with other bodies as a resistance towards fixed boundaries. These questions emerge also from facing with the implications of that risky relationality. In the biotechnological age, when science produces new images of bodies, it seems that it is for art to experiment with how we are to live within them. Experimentation of bodies within contaminations demands thus imagining of the new scenarios along the implication they might foster. Eighteen years before the first successful xenotransplantation, Elio Caccavale's becomes one of such imaginings: '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.'[36]

In *Utility Pets* (2004) (Figures 3, 4, 5 and 6), Caccavale speculates on what life might be like once xenotransplantation becomes our everyday reality, 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 here 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,

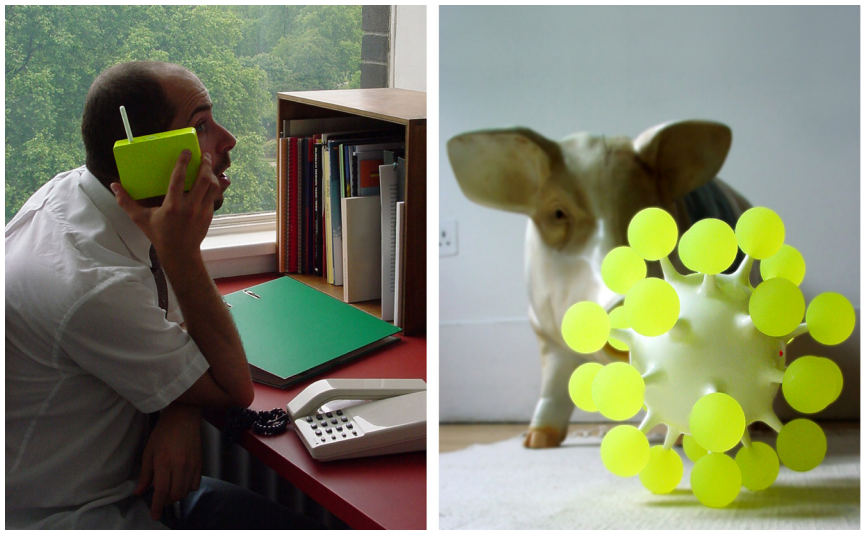

Figure 3 Elio Caccavale, *Utility Pet. Toy Communicator*, 2004. Copyright Elio Caccavale Design Studio.

Figure 4 Elio Caccavale, *Utility Pet. Smoke Eater*, 2004. Copyright Elio Caccavale Design Studio.

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?

Figure 5 Elio Caccavale, *Utility Pet. Low-resolution TV*, 2004. Copyright Elio Caccavale Design Studio.

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.[37]

Instead of focusing on the uneven power relationality between species, as a result of the obvious utility of the pig for human purposes, Caccavale experiments with a relationship of compassion, care and ensuring a sense of happiness for the non-human. A profound, 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

Figure 6 Elio Caccavale, *Utility Pet. Comforting Device*, 2004. Copyright Elio Caccavale Design Studio.

contentedly. In this way, instead of criticizing the biotechnological future that has already become a scientific possibility and medical practice, we need to practice experimentation as contaminations by creating the spaces that make living with and living as those bodies possible. Through the creation of contaminations as part of the process of understanding and living, the new hybrid bodies become themselves transformative ways for all of us to live, whoever we may become – selfish killers, companion species or both?

The alliance of affect

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.'[38] 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 focussing on what they are. This is a Spinozian plea, drawn from his *Ethics* and put into motion:

> 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.[39]

Experimentation with bodies' capacities leads to the construction of the unexpected, of new knowledge, 'nonhuman becomings of man',[40] human-pig bodies, and horse-human friendships, new alliances that become creations that cannot be presupposed and yet demand to be lived with. Since we do not know what our bodies can do, how particular alliances will influence those bodies, by experimenting, seeing what happens, we create spaces for them to thrive. 'Alliance or the pact is the form of expression for an infection or epidemic constituting the form of content',[41] as Deleuze and Guattari argue. Experimentation as alliance with contagion not only moves bodies but also shapes them. How, though, can we practice the transformative relations of bodies within affect in a way that sustains, rather than dismantle into fixed agreement, the movements of contamination? In other words, how can our chimeras, temporary alliances foster change, rather than perpetuate old fears and ideas?

Eugene Thacker asks similar questions when analysing the phenomenon of biotech that creates and commodifies new bodies. As he writes, 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.[42]

Rather, biotech forces the use of relationality in generating new, hyper-biological bodies.[43] The threat concerns our ignorance of how biotech uses the transformative relationality. In biotech practice, what is defined as biological is 'purified' into an enactment of the idea of being 'biological', while what is considered to be natural is an enactment and embodiment of the idea of 'natural' as a state of perfection, purity, harmony and autopoietic balance. 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'.[44] By implementing such processes of relations into given ideas, bodies are presupposed not as an event generated through risky alliance, but as encoded information, controlled merging ready to be coded and decoded. A transformative understanding of bodies is used here to manipulate such ideas as health, beauty and human dignity according to presupposed, fixed aims. Thacker calls this 'biotech informatic essentialism',[45] which does not ignore the relational and processual nature of bodies, but primarily uses it to instrumentalize those bodies in the name of fostering economic and political gains.

In other words, when we practice bodies' contaminating relations and processes in a way that tries to govern those bodies following the regimes of production, profit and ideologies of sustaining the order of their classification and identification, then the old hierarchies, ideas and power structures are strengthened. Affect as contamination, when instrumentalized and unbounded by implications, might be a tool for fulfilling given ideas through their universalization and generalization and, therefore, disavow the risk and vulnerability that comes from the partiality and situatedness of being in the contaminating and contaminated encounter. Contamination is not a neutral state. It can be used as a way of resisting the fixation of bodies, but it can also enact and enforce violence and commodification of bodies it generates. In order

to understand the implications of affect, that is, affect as contamination, in a way that would not follow essentialist presuppositions, as specified by Thacker, it is crucial to analyse the conceptual history of affect and why it was introduced into the philosophy in the first place. In particular, Spinoza's theory of affect outlined in *Ethics* reveals the transformative character that become imperative for not only understanding affect as contamination but also practising it as contamination. I distinguish three main elements of his notion of affect that were later rewritten by Deleuze and which are particularly important to address in the face of common criticism that the study of affect generates, namely affect is: (a) distinct from emotion; (b) an encounter and movement of thought and body; (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 as contamination may be possible.

Affectus or affectio?

The double and often interchangeable meaning of the word 'affect' obstructs the capacity and implications of its contaminating character. 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 and feelings, with the state of the body and the body's power for action. Affect when used as synonymous with affection can mean being against representation and identification and imply more embodied because focused on emotional approaches in analysis and understanding.[46] The critique of affect theory and its usefulness for cultural, political or literary studies mainly focuses thus on the confusion of the term that is contradictory and vague, at least. The word 'affect' deserves thus a more careful attention if it is to be used further.

As Deleuze has already remarked, the contradictory use of affect derives from the interchangeable use of two terms that Spinoza distinguished from each other: *affectus* and *affectio*.[47] 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.[48]

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

> By affect I understand the affections of the body, by which the power of acting of the body itself is increased, diminished, helped, or hindered, together with the idea of these affections. If therefore, we can be the adequate cause of any of these affections, I understand the affect to be an action, otherwise it is a passion.[49]

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'[50] and *moveo* means 'to move, stir, set in motion, shake, disturb, remove'.[51] However, the word 'emotion' also refers to 'strong feelings, passion; (more generally) instinctive feeling as distinguished from reasoning or knowledge',[52] and, as such, was used, for instance, by Descartes to describe the motion of spirit that agitates and disturbs the thoughts.[53]

In the lectures on Spinoza at Vincennes on 24 January 1978,[54] in order to signal the importance of the distinction between *affectio* and *affectus*, Deleuze introduces thus 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'.[55] *Affectus* 'refers to the passage from one state to another',[56] and, as such, Deleuze argues, it is purely transitive and therefore cannot indicate or represent something.

Affectio, on the contrary, is a kind of idea. The Latin *affectio* means 'a change in the state or condition of body or mind, a state or frame of mind, feeling'.[57] 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. When generating understanding from *affectio*, we are bounded by the body's fixed state that it is positioned in. It is like looking at the coagulated blood of Marion and Viny in search of an understanding of the AOO's performance. In that sense, knowledge resulting from affection is 'inadequate' for Spinoza, as you cannot not only grasp the causes of things you encounter, but also you cannot understand its implications. With affection, we are operating within already fixed state of things that is already defined and ordered. To acquire 'adequate knowledge' – Spinoza calls it the knowledge of causes and implications of bodies in relation – we must experience capacities of bodies, their multiple connections and encounters with other bodies – we must experience *affectus* – the risky and multiple relationalities of transition. The more relations (*affectus*) we experience, the closer we come to the generation of what Spinoza named adequate knowledge – the knowledge that results from the acknowledgement of partiality of one's finding and situatedness of one's capacities.

Careful reading of Spinoza's differentiation between *affectio* and *affectus*, between relations and the ideas or states of bodies resulting from these relations, points to the importance of relationality as contamination 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 and seeming autonomy of bodies and come closer to the knowledge of conditions and implications of bodies in relation. In this way, the particular *affectus–affectio* relation is not based on determination. Affects cannot be determined by the state of bodies it is assumed is caused. To put it differently, our relations with other bodies cannot be determined by our ideas about those bodies alone. 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.

Affect as affectus, as contamination, 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 that of a state or of an idea. Precisely this falling into state of things 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 dynamic and violent character of blood transformation resulted in its destruction in the moment of identification, and even the artists who 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 as contamination 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. Affect as affectus, as a passage of transformations and contaminations, implies an approach based on the sense of a risk of encounter.

Good and bad encounters

Affect as affectus, as relations of contamination, is risky and precarious. Bodies within affect as contamination condition and transform each other, and we do not know what the bodies can do until we test, experiment with their relationality. But how can bodies relate with each other, experiment within such a precarity because without any given rules on how to relate and not to die, not to be consumed or destroyed?

Spinoza already mapped these risky encounters of affect which gives some guidance. He distinguished two kinds of relations: passions originating outside one's body and actions originating in one's body. It is through their correlation, through the relations and generations of passions and actions, that we can understand what is at stake when thinking and practising affect as contamination. Since most of the relation we experience come from outside, as Spinoza argues, this constructs a particular dependence of a body on its environment. It is through these relations that we can understand ourselves and others because relations of passions not only inform us but also form us.

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 are the passions that Spinoza calls joy.[58] They positively influence one's well-being, because they preserve rather than destroy body. The joyful passions preserve our drive to life and therefore increase our power to act to relate further. In this account,

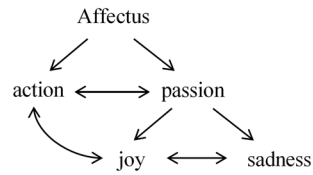

Figure 7 Diagram representing the kinds of encounters as described by Spinoza. Drawing by A. A. Wołodźko.

when passions agree with our *conatus*, they produce joy and increase our power of relating and multiplying those relations. Thus, our desire to relate comes from our *conatus*, our drive to increase our power in order to act, to multiply and initiate relations.[59] When the body in relation cannot be combined with the other, when relations disagree with each other, Spinoza names them sad passion, 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 (Figure 7). This power to act (*potentia*) becomes thus a result of relations of bodies and also its conditioning. *Potentia* is a force of multiplication and transformation that does not demand any production, apart from multiplication and further transformation. 'It has no gender; is neither male nor female, neither human nor animal, neither animated nor inanimate', it 'unites all material, somatic, and psychic forces'.[60] Through relations with bodies, between bodies, we are thus not only preserving ourselves, but we fuel the *potentia*, our force to transform, in its drive for multiplication.

Importantly, joyful and sad passions are not fixed, they change the body's capacities, intermingle, depending on the environment and a body in relations. In this way, passions can transform into actions, multiplying into encounters that could generate new ones resulting in enriching a body. Joyful and sad passions constantly intermingle.[61] 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.[62] This is why, as Deleuze concludes, there is no opposition or essential dualism between passive and active affects. We can reinforce our activity of knowing by multiplying relations where we test and experiment with which relations enrich our bodies and which do not. Only through such encounters and experimentation can we understand which bodies agree with each other or not. 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.[63]

Since to understand the body is to know what the body can do and what are its capacities and functions, knowledge about passion has a transformative character. 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'[64] (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 in his notion of parallelism.

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. As such, bodies are constituted within encounter characterized by continuous risk and doubt: we do not know in advance which relations are bad and which might, ultimately, be joyful, that is which relations can lead us to action and which can diminish our understanding, hurt bodies or kill. Therefore, we must experiment first on what happens on ensuring the thrive of the *potentia*. Because the way that bodies contaminate and are contaminated by creates knowledge about those bodies, it is through seeing, sensing, witnessing and experiencing what happens, how relations enrich or diminish bodies, that we can understand and are able to practice those bodies. However, nothing is universally certain within affect. The observation might shift each time bodies contaminate anew. What for one body appears to be good and joyful may be destructive for another. Affect implies the continuous process of experimentation and transformations that cannot be universalized. It is a hungry and never exhausted movement that demands careful mapping in condition of a continuous risk and doubt. In that sense, the understanding of affect as *affectus* inevitably leads to a particular understanding of ethics. Within thinking with *affectus*, with contamination, ethics becomes the practice of learning how to secure the spaces that allow relationality to occur that rather

than destroy bodies: help them to flourish. This particular understanding of ethics will be explored later (Chapter 5).

Affect as expression

The processes of experimentation as encounter that affect embodies focus on the conditions of creation, on how to secure the spaces that allow relationality and contamination to occur, and how to continue its 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. In other words, it calls for affect to be an ontological condition of bodies – the expression through relation. To think about affect as expression points thus to the transformative sense of relationality.

Bodies within affect are not only contaminating and contaminated by, but also at the very same time, these contaminations constitute those bodies, with each new encounter, anew. Affect as such demands a constant negotiation as you do not know how a particular relation will change not only you but also others. In this way, affect is not a simple joining or participation of bodies in relation but their creation. As Deleuze marked, the notion of participation that is understood either as material (to be part of something), imitative (to imitate), or demonic (to receive something)[65] was constructed from the perspective of being outside of the relation. The concept of participation, as such, assumes that we are already formed before the relations happen. Here, relations between bodies do not condition those bodies. The notion of expression presupposes, however, unity as a property of substance – an equality of being that implies no hierarchical relation between bodies and their relations. From such characteristics of expression, which not only generates but also transforms bodies, the sense of relationality appears to be messy, full of surprises and risks. This risky relationality demands a constant yet careful negotiation and experimentation, because the expressive character of affect implies that to relate is to know and, in turn, to materially become with something.

This material becoming with bodies' relationality and their transformations pervades discussed *Contaminants* of AOO and Caccavale. 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 generate experimentation, to test what bodies can do, even without us, other bodies, knowing about it. It might, therefore, be argued that the whole philosophical characteristic of affect and its importance is meaningless in the face of more tangible artistic endeavours that directly experience becoming of bodies in their relationality.

However, such a conclusion of priority of practice over theory would immediately presuppose the dualism of faculties and experience that the relationality of affect undermines in the first place. Indeed, without bioart encounters, we are still able to experience the intensity of contaminating relationality, just as much as without Spinoza's *affectus*, we are still able to formulate that experience of contamination. Affect as *affectus* offers a way of what formulating alliances means and implies, namely immanence of thought and practice, their mutual and constant conditioning and expression through contamination. Affect as *affectus*, rather than fostering one method, helps to recognize the urgency of experimentation and trying out as an onto-epistemological practice.

Affect that matters

What matters within affect as affectus? Criticism, scrutiny, search for ultimate truth that would establish a certain knowledge about reality, our bodies in it? Bodies within affect as contamination seem to be indifferent to such virtues. In the relations of contamination, when you do not know what a body can do, and only through experimentation and encounter you can test what happens, we are immediately confronted with the radical because of not only epistemological but ontological and ethical implications of our actions. We not only encounter to understand those bodies, but while encountering, we also shape our bodies. The notion of affect in the sense of the word 'affectus' – that is as a passage between bodies that conditions them and shapes them – helps to see and care for the implications of a radical openness that is also a vulnerability of bodies. Affect as *affectus*, in this way, reveals the problem of genesis of bodies to be political, cultural and ethical. It calls for the shift in thinking that can be established when we change the epistemological inquiry of 'what can I know' into 'what must I do' and 'what can I hope'.[66] Affectus, affect as contamination, implies a shift from epistemology to ethology. Here, affect becomes a combined object and practice, where each of its components cannot be separated from each other. Affect as contamination urges for an alliance with a mutating body, with its movements, flows, 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 whose outcomes are not certain, and whose joys and sadnesses are not equally distributed.

Through bioart's relational practice with contaminating materialities, we can confront with affect's relationality, where bodies' passions are inseparable from their actions. Artists' experimental approach to the body offers stories on how affect as relation is possible in practice but also what are the implications of this practice. Bioart generates actual consequences of bodies' contaminations for thinking and practising embodiment. After all, Deleuze and Guattari already wrote on art's distinct potentiality for the generation of affects and percepts.[67] The question that bioart highlights, however, are already a result of practice of their precarity, accounting for 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*, transformative contaminations that generate 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.

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. Jacques Ranciére defines aesthetics as the regime of the sensory, the distributions of sensations 'that create specific forms of "commonsense"'.[68] 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 which relates with and facilitates the movement of transformations while transforming.

In the search for the conditions of creation and relations of transformations, we can facilitate interactions between human and non-human and facilitate bodies in their relationality. This notion of contaminating relationality 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'.[69] In order to know the body, you must first experiment with what it can do and 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 non-linguistic, a-signifying meaning entangled with matter. 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, as creative and spontaneous, and having the capacity for transformation and change, affect generates new, non-linguistic meanings[70] that are not supported by a regime of cognitive semiotics grounded in the signifier/signified paradigm.[71] 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 it'.[72] In this way, affect redefines the encounter between bodies, revealing the dimensions of an event. By thinking in terms of affect as contamination, meaning appears not as given for interpretation, but rather as something created during the contamination happening.

3

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?

Practising affect, that is, acknowledging and acting upon the contaminating, transformative nature of relationality of our bodies, forces us to consider all the above questions in their implications. 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 8) 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.[1] The project had a politico-ecological tint. The artists initially wanted to serve the baked egg foams to politicians and business owners of the districts in which the foams were made. 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 breathe this air every day!'[2]

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 world were translated through an equation into an edible recipe. Each pollutant corresponded with an amount of a specific spice. For instance, particulate matter (PM10), the

Figure 8 The Center for Genomic Gastronomy, *Smog Tasting*, 2011.

name used to denote a collective of solid or liquid particles of dust, smoke, soot pollen and soil[3] was replaced by black pepper. Nitrogen Dioxide (NO^2), a reddish-brown gas emitted through the combustion of fossil fuels[4] was represented by an amount of wasabi powder. Finally, Sulphur Dioxide (SO2), a colourless gas emitted by the combustion of fossil fuels[5] 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 9).

The third part, *Smog Tasting: Smog Synthesizer* (Figure 10) 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.'[6] 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.[7] 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

Figure 9 The Center for Genomic Gastronomy, *Smog Tasting 2.0*, From Test_Lab Genomic Gastronomy.

Figure 10 The Center for Genomic Gastronomy, *The Smog Synthesizer*, 2015. Photo by Jordan Ralph Design.

smog-tasting cart creates a visceral, thought-provoking interaction with the air all around us.'[8]

In this three-part project, CGG reveals multiple levels of how meaning functions and how it is generated within an 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, with the imperceptible contaminations and the significance of their implications. The artists demonstrate the multiple complexities of production and the generation of meaning through the encounters that taste embodies. Their numerous performances and workshops are focused on the transformative experience of tasting and eating food – habits which would otherwise remain unnoticed or unquestioned because they are intrinsic part of daily experiences. 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. After my encounter, I had been thus asking: Can this intimacy of taste – of a mixture of multiple bodies – not only change my understanding of these bodies but also change these very bodies?

Taste of affect

Affect as contamination demands a shift in how we understand how meaning emerges. Within affect we become implicated in the risks of meaning formations and that radically poses changes not only for the way we think bodies are but for bodies themselves. For decades, the humanities have been prioritizing linguistic meaning formation – human reflections and textual analyses – even though within art history and cultural studies there has been a wide understanding of how meaning production needs to be expanded from text to various 'new media' – first photography, then film, now digital media. Today, in view of not only technological but also artistic manipulations of living bodies and use of living matter as a creative medium, we are faced with the possibility of meaning formation through investigation and questioning of what is life and what can living bodies do. Despite this, 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.[9] Here, following the *Contaminant T*, the urgency that is posed by affect as contamination is that meaning is not a human cognitive act alone. Meaning can be something that has a material dimension, that shapes and drives bodies according to relations they are able to make and are made by. The struggle that the *Contaminant T* raises thus concerns the question of implications of a non-linguistic meaning generation that needs to be mapped for the practice of affect.

Following Ferdinand De Saussure within humanities, we learned and got used to ascribing linguistics a special place in the field of human knowledge – its laws became 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. 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'.[10] The influence and power we have ascribed to the textual language provided thus schemes for how social and cultural structures are constructed in general, having its peak in the linguistic turn.[11] These schemes proved to have a profound implications for the way how we understand and practice our bodies. In particular, De Saussure's mapping according to a two-sided understanding of a sign that is based on the relation of negation, always already referring to something that is not, influenced the way how we understand and practice knowledge – through the negative differentiation of 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 carries the meaning.'[12] This difference between signs is based on an antagonism: signs 'are not different from each other, but only distinct. They are simply in opposition to each other'.[13] Consequently, the antagonistic and dualist understanding of a sign presupposes humans to be the lonely constructor of meanings independently of bodies and their materialities. In other words, what we find meaningful is 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, and so on.

However, 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 bodies within contamination while maintaining old analytical tools of prioritization where meaning is solely a product of linguistic reflection? How can we consequently discuss contaminating relationality of non-anthropocentric, feminist and ecological understanding of bodies if we maintain a vision wedded to the linguistic (semiological) construction of meaning? The way that the notion of taste is exercised within the cooking-eating performances of CGG already contaminates what we take as meaningful, and how we practice meanings on the outskirt of signification.

In the CGG's performances, it is through the risk of eating that one enters into the contaminating space of meaning formation. Consequently, taste as encounter that conditions the dynamic and contaminating characteristic of bodies becomes the encounter of bringing non-linguistic form of understanding and navigating within the encounter. Importantly, the taste that CGG experiment with does not seem to comply with Immanuel Kant's notion of taste. For Kant, taste is a disinterested ability to judge an object, where taste is a part of an aesthetic judgement, 'one that is not influenced by charm or emotion';[14] yet, it 'rests on subjective bases, and whose determining basis cannot be a concept'.[15] It is therefore crucial now, to slow down for a moment, to notice how taste while eating breaks the relation of signification present in the aesthetic theory of judgement.

Taste, for Kant, as a capacity to respond to how the object presents itself to the subject, irrespective of what this subject finds important,[16] is a result of a harmony between the faculties of the subject, rather than harmony between different bodies. Thus, harmony that results in Kant's sense of taste is a cognitive process that initiates the ability to judge, yet gives no cognition, no understanding:

> Aesthetic judgement 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.[17]

From this it 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, it is also not only a result of the harmonization of one's faculties. When we think and practice affect as contamination, it is within an encounter that, if it results

in harmony, it is a harmony of not only cognitive capacities of a human but of bodies' multiple and varied capacities.

A sense of taste that bodies within affect imply has a material, relational character. Rather than disinterested, it is implicated and it implicates bodies into their encounter. As such, taste is an encounter that not only allows for alliance with that which is outside myself, but it also allows for and fosters 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 contrary, taste of bodies within affect becomes a way to encounter 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',[18] namely, the complex relationality and the coexistence of places and people, their food and the way of eating, 'in how they come together',[19] how they may disagree, mutate and transform each other. In other words, taste becomes a way of a non-linguistic investigation of mutations, of risky and uneasy encounters within which the meaning of these bodies comes to matter.

Contaminant C like Cobalt-60

It reminded me of a curry tomato sauce. I could have eaten it before – that common the taste seemed. From tasting it, I would not have known about its mutagenic nature. *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'.[20] 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). In this work, CGG made an investigation into the radiating and mutating capacity of Cobalt 60 – a radioactive by-product of nuclear reactor operations[21] (Figure 11). Cobalt 60 has been extensively used in medicine 'as a radiation source to arrest the development of cancer',[22] but also in the food

Figure 11 The Center for Genomic Gastronomy, *Cobalt 60 Sauce*, at the MU exhibition 'Matter of Life Growing New Bio Art & Design' (28 November 2014–1 March 2015). Photograph by The Center for Genomic Gastronomy.

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 the Second World War.[23] Yet, despite this use of mutated plants for over sixty 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.

In this case, then, the taste of the sauce 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 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.

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 handout catalogue for V2 (2014)[24] CGG published the recipe for the sauce, inviting everyone to take a persona of a hacker and a chef and join 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.[25]

In art practice, the use of recipe within the frame of the cookbook has been a political act towards the reclamation of narration and meaning.[26] The process of cooking brought into the public eye of the art encounter served to materialize the invisible yet defining labour of women. For feminist artists of the 1970s and 1980s, the list of cooking ingredients, the design and use of spaces, tools, protocols and narratives of their combination and processing came to not only symbolize the political and socio-economic strategies of enslavement but also the possibility of their overthrow. Kitchen, with its rituals and tools, became the space of resistance through which not only methodologies but also identities and bodies are shaped.[27] As Lindsay Kelley points out, bioart that works with recipes implicitly taps into power relation of meaning-making practices and their control shaped by feminist art: 'Recipes and cookbooks symbolised the rigid social norms the feminist movement sought to overthrow. Feminist artists would cook and eat on their own terms.'[28] Today, reclaiming tasting through the recipe inevitably becomes contaminated by the history of this resistance. The recipes of CGG are not thus just an investigation of food ingredients, but become a contestation of the regimes of meaning that governs our bodies and their practices. To share the recipes is to defy power relations that still govern the way we eat, produce and shape not only our relation to food but also to the material and intimate spaces of meaning that exist between human and non-human. By making a recipe for others, CGG demystifies not only the production of the sauce, the science behind it, the used ingredients in it, but it also destabilizes our presupposition about what the process of making food and eating is and implies.

Through the recipe as a process of investigation that opens up intimate and material forms of meaning generation, CGG created spaces of tension between what is given and experienced, shaping information into processual and material knowledges and meanings. 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 and the recipes as the encounter with relations opens up thinking about meaning as generated in relationality through spaces of learning and not simply only informing. Taste becomes a sign of resistance – a sign that resists to signify and yet creates meanings.

The point of view of taste

Practising bodies within affect as contamination implies material and relational notions of meaning – it implies resistance to the already given regimes of signification. Since it becomes generated within the messy relationality of risky encounters, experimentations and negotiations, meaning changes not only its character but also the ways and methods of its formation. Meaning within affect gains an existential character, it depends on bodies and their relationality, and as such, comes close to the pragmatic semiotics as shaped by Charles Sanders Peirce. It has an existential dimension as it demands 'learning by experience' in contrast to 'abstractive observation',[29] revealing that signs that signify meanings are not independent of the materiality of their relations.

Signs do not stand for something that is not, they are not a construction in the negative understanding of relation. Instead, as Peirce argues: 'a sign, or representamen, is something which stands to somebody for something in some respect or capacity.'[30] 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 representamen,'[31] which is detached and disinterested. In order for the sign to be realized, there must be a spatio-temporal action. A sign must be 'materially embodied' within the relationality of bodies.[32] This is why John Deely, following Peirce's notion of semiosis, characterizes semiotics in a broad sense, including 'natural phenomena as well as purely cultural and literary texts'.[33] Practising signs must have thus a dynamic, relational nature. It must betray the very characteristic of what we consider to constitute a method itself. A method seeks to reveal and establish certain truths, it leads to particularization and a lack of adaptability of a theory for a variety of phenomena. In this sense, 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. The existential notion of sign that affect as contamination implies demands a method without fixed rules or protocols, yet it does require some kind of recipe, a point of view rather than applying a given rule.[34]

Taking a point of view as a starting point presupposes two major implications. First, 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, as Deely indicates, the existential nature of semiotics acknowledges the processual and relational nature of how our existence and its understanding are constructed and how it is inseparable from our constant reflective relations on how these meanings are formed.[35] 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 concerned with the study of genes and their traces, refers to a more relational understanding of interaction between genes 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 on 'how an organism relates to the larger world and how all the parts of the organism work together'.[36] In order to understand bodies in genomics they do not study bodies as fixed and autonomous, but as the relations that generate those bodies. In this way, they take a perspective on relations that somehow determine what becomes important. In the context of biotechnologies of food production and what is considered as food sustainability, they thus argue that a great deal of economic and media attention goes to 'hi-tech solution, such as GM food and in vitro meat',[37] an area in which there are already simple and sustainable solutions widely available, like, 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 this way, CGG points to their understanding of technology not as something 'artificial' or as a mediation between us, humans and 'nature,' but as what Haraway defined 'natureculture' and Barad 'intra-action'.[38] Technology

is not only an entangled relationship of co-dependency but also an exploitation of bodies and things, conditioning and conditioned by each other through their emergence, function, endurance and implications. In their work, CGG thus reimagines and de-familiarizes what we take for granted, by introducing a point of view of eating and growing beans into their practice of relationality, beans become just a starting point for thinking with 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. We are not interested in a universal answer to all the problems that biotechnology may cause. Instead, we 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. In the case of CGG's practice, the point of view can also be seen in the 'tools' they use in their investigations.

CGGs are not focused on the particular methods of 'doing science', are not dressed in white coats and do not tend to perform in the presumed sterile environment of biotechnological labs. For some arts, this fascination with the methods of science and its attributes of clarity and purity 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 12). They approach the manipulation of living bodies as an act of brewing, seed saving, cheese making, mutagenesis and transgenesis, that is as ways of conducting the search, an apprenticeship in how bodies mutate together.[39] Their mission is not only to imagine but to engage with the senses while thinking about our food habits through the various practices of body manipulation.

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?'[40] Here, the act of eating becomes inseparable from the act of becoming with food and from the necessity of facing the implications of these processes. Their performance investigations are a transparent exploration of encounters with the flavours and smells of ingredients – nothing here 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.'[41] In their work, the point of view of taste is a messy

Figure 12 Zack Denfeld (left) and Catherine Kramer (right), The Center for Genomic Gastronomy.

encounter with living bodies. As they stipulate, taste becomes the creation of an opportunity 'to interact with data'[42] and to become with that data.

In this way, as a mutually tailored encounter, taste becomes a point of view that 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 are prolonged, who and what is implicated with and by them. When meaning becomes something that is integral to, rather than exterior to life and living bodies, something becomes more important in the sign that generates what might be meaningful for the bodies within relation of transformation, within risky contaminations of their encounters.

Relations of significance

The ideas about constructing a discipline that would focus on relations between life, information and meaning already emerged with the discovery of the genetic

code in the early 1960s.[43] 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 *Human Genome Project* (HGP) in the 1990s. Scientists 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.[44] 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 a body consequently frames this body within its own logic of profit and production, so that an existence of this body can be only meaningful when functioning within the realm of data signification.[45] Each medical and research practice, test, and access to working with the body becomes an issue of law and rights (*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 bodies within affect. Thomas Sebeok named this 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.[46]

The idea that semiosis is an integral part of all living systems challenges not only the independent position of an interpreter of meaning generation but 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.

As Sebeok stipulates, the foundations of biosemiotics were laid by Jakob von Uexküll,[47] who 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 to its environment. Mostly, he focuses on how particular relations within the environment of the living organism are constitutive of its existence. By looking 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[48]), 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',[49] a sense of smell and a sense of temperature. All three stimuli, which Deleuze and Guattari call affects,[50] determine what it means to live as and be a tick. We can thus understand the life of a tick, only through mapping the relations that occur between the living creature and its environment.

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'.[51] Brett Buchannan 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 the ontological dimension of this relation'.[52] Since organisms, rather than being seen as machines or objects, are subjects or agents that actively create what is significant within their environment, Buchannan argues that this assumes an 'interpretative account on the part of the organism'.[53] 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.

Meaning is not given and it is not a product of reflection alone, but rather meaning is also 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.'[54] 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'.[55] From this, it follows that it is not the subject that constitutes action and meaning, but the action: that is, a relation – what I call affect as contamination – that constitutes subject and meaning. Action becomes 'a vital functioning of animal subjects';[56] 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.

This material and relational character of meaning that emerges within a biosemiotic approach 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' 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.[57] 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.[58] This vital functioning is what later behaviourists called significance (importance). Such an existential notion of meaning rooted in material relations of bodies, their

desires, encounters and implications opens up therefore a possibility to think about ways of how materiality of meaning as a condition of practising affect as contamination is possible.

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 and thrive. 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.'[59] 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 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.'[60] Moreover, he argues for the values to be objectively relative. This means that the value of something, that is 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 as a relation it is situated, it happens within a particular situation.

We can view this material understanding of meaning through the food encounters that CGG practice. 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 they bring. 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 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.[61]

Since 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, signs become understood through a learning process: 'Learning is essentially concerned with signs. Signs are the object of temporal apprenticeship, not of an abstract knowledge.'[62] Signs should be thus understood 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.'[63] As noticed by Christopher M. Drohan, this existential understanding of signs shares some similarities with other philosophies that discuss an existential notion of meaning such as, for instance, Martin Heidegger who understands epistemology through

ontology.[64] 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.'[65] Inna Semetsky shows this imperative of experience as 'becoming with' into knowledge formation in Deleuze's thought through John 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.[66]

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, that is they 'are passages, becomings, rises and falls, continuous variations of power'.[67] 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.

A consequence of such an existential character of a sign is that once the search for meaning is fulfilled, and the sign-producing meaning disappears as a sign, it can again become meaningless, depending on a new relation. As such, a 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 – between bodies within affect as contamination.

The question of significance or importance opens up the possibility of thinking not only in a relational way but with the implications that affect as contamination calls for. It introduces the way that affect foregrounds the expressive and transformative nature of bodies. The urgent question for now is: How are we to transform the level of signification, which even this book relies upon, into transformative, 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*, this 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 practising material semiotics? How can such a transfer of data create new material experiences?

When we enter the online database of the European Environment Agency,[68] 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 bodies co-relate with their environment in order to live within the smog. From this can be noticed that the two meanings that Morris distinguished, namely signification and significance, although different, do not seem to 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 intermingle and through contamination shape each other. The relation of signification and significance reveals the dynamic dimension of meaning. Rather than focussing 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 and bring into an encounter the relations of the contaminants.

Stacy Alaimo calls this dynamic meaning of bodies generated through relations in terms of 'material significations'; that is, a metonymic slide where body and environment construct what she calls a 'trans-corporeal space'. She explains it in the context of Rhonda Zwillinger's photographs of people with MCS (Multiple Chemical Sensitivity). Since MCS has no standard treatment procedure and definition, to understand it, simple categorization, identification, application of a method, is futile. The only possible 'treatment' of MCS, as she notices, is the embracement of the relational nature of bodies emergent within the environment. 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.'[69] In trans-corporeal spaces, a body and environment are already interchangeable, and are already continuous in their permeability – they are within affect as contamination. 'Bodies are not self-contained.'[70] In order to grasp the MCS bodies' 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?'[71]

Affect as contamination urges for practising the material signification, it reveals the trans-corporeality of our bodies, generated and shaped by the risky relationality within other bodies, environments. The question of, for instance, how life might be once the smog becomes part of us, within us, as intimately as food in our mouths, becomes thus a question about the importance of that investigation. Thinking and practising significance becomes a condition and implication of affect as contamination – of the relation of transformation that we live in. Importantly, 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.'[72] 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, challenging the search for truth.

The truth of significance

The urge for meaning rather than truth seems to be a necessary consequence of affect as contamination. 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 recreated, 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 practising the materiality of meaning, how can we share and further practice that knowledge in respect of bodies? Does knowledge accumulation within affect as contamination, within contaminating relations make sense, or are we prone to a never-ending investigation of what bodies can do and mean?

In 'Proust and Signs' Deleuze writes: '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,'[73] which signals not only the profound inspiration he finds in art, which allows him to engage in his pursuit to overcome the priority of signification. Deleuze 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 the accuracy that truth implies. At the same time, he proposes

a mutating understanding of truth driven by what becomes significant. Here a radical challenge for not only philosophy is posed by affect, namely: How can we act and find significance when there is no fixed truth to rely upon?

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. First, 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.'[74] 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.'[75] 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',[76] Deleuze argues that the search 'is in fact a search for truth.'[77]

Deleuze's understanding of truth that affect implies 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.'[78] 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*.[79] 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.

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.[80]

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

> 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.[81]

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 which is important. Such a persona is prone to violence. However, this violence is not based on a negation of the one who disagrees, since then an agreement would involve an assumption of caring for already given idea to be true. When we are within the risky relationality of affect, we do not have any sign of signification to be universally accepted, as each time with each encounter, we do not know what the bodies can do or what might become important for them. The violence of Deleuze's persona is thus driven only by the sense of importance, it is fed by multiplication, by a continuous adding of what is significant. This violence 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.'[82]

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,[83] when there are too many contaminants that implicate us? How 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',[84] how can this be done without falling into the dialectic negation? In other words, how can we maintain the forces of multiplication without being subsumed by them – in other words, how can we sustain joyful affects in the violence that the significance of many may produce?

Deleuze points to a condition, a persona that replaces the friend. It is 'an invisible, imperceptible dark precursor'.[85] 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.[86] 'The dark precursor is not a friend'[87] since it does not just carry meanings that ensure confirmation and communication.[88] 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.'[89] 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, violating habits and established norms, 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 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 acknowledgement 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 in order 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, following the implication of affect as contamination, co-construct meanings? If meaning that affect implies is not added, and instead is something changeable and open, yet leaves the actual imprint of change on bodies in contamination, how can we make any cultural and legal decisions responsibly with the notion of affect? 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.

To practice bodies within affect as contamination implies that we must lose those criteria that have worked for what we believe to be known, and instead start to imagine ways of living without them. How can we search for that which is unknown yet which might be significant? How can we live with the violence that this search implies? 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 become the dark precursor of multiplication that rather than destroys and violates can produce new relations without being subsumed, governed by them and yet become with them?

Contaminant C like a cannibal community of meat lab

In the work *Eat Less, Live More – And Pray for Beans*, Zack Denfeld and Catherine Kramer 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 13), 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 not only DIY biologists, scientists and meat lovers but also those in search of company in their life. All these different people are gathered in the Lab to share

Figure 13 The Center for Genomic Gastronomy, *Community Meat Lab Amsterdam* (Video frame). Available online: https://vimeo.com/50204650 (accessed 6 April 2016).

what their love of eating meat means to them. Together they form a practice of growing meat from animal cells without killing the donor animal. In order to cultivate the cells each of them donates their blood as food for their future meal. Cooking and eating it together becomes in this way a form of resistance against the laws and corporations that determine what and who can be eaten. At the same time, the very struggles to maintain old desires and habits of eating become here neutralized by the tone of the story telling.

The artists imagine the scenario that seems far from the reality of the industry of cultured meat today. Today, the growing of meat in the lab is no longer a speculation but a scientific reality, when, as I am writing now, the cultured meat is soon to become a commercial product.[90] In their work, thus, rather than pointing to what meat grown in the lab is and how it can promise economic profits, the artists expose how our eating habits might change once we start to think in terms of different configurations of what sustainable food might be. The artists tell a story of how the habits of production and consumption of meat force us to change us and our habits, once we practice collective interdependencies, communal arrangements of shared responsibility and care. They speculate on the new ways of living with biotechnological possibilities, that rather than

shaped and driven by economical gains, are formed by the environmental restrictions and individual desires. This is a speculative approach that puts at the centre the actions of relations that may generate new scenarios. The video explores new relations that are driven by what might turn out to be significant.

> *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.[91]

In the foregoing transcript of a 2.5-minute animation, CGG imagines, in a humorous and light-hearted way, what it might be like when animal meat will be banned as a result of an 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 may induce new habits once the relations of significance change, when rather than profit and commodification, the care for community and interdependence become important. Driven by the dark precursor of dissensus, of the commons that do not fit into today's reality, CGG

challenges the ideas of signification by narrating a story where we start to ask: 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 yet. 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 humans being sustained through the consumption of their own bodies, albeit on a singular, non-massive production scale, gives philosophical tickles. It opens up weirding spaces of different forms of care that begins through losing once subjectivity through becoming food. Through cannibalism, the sense of what bodies and communities might be like dismantles what Patricia MacCormack called the human privilege and exceptionalism when it comes to who and what can be eaten.[92] As she writes: 'Cannibalism is ethically elegant incomparison. A gift from death. The human parasite become host.'[93] Similarly, Annemarie Mol in her *Eating in Theory* argues that through being implicated in the metabolic processes, we not only challenge the human exceptionalism but also expose our biases, material contaminations and conditionings that literally nourish our bodies. As she writes, 'as an eater I do not first and foremost apprehend my surroundings, but become mixed up with them. . . . The hope is that exploring situations of eating may help to reimagine being as a transformative engagement of semipermeable bodies with a topologically intricate world'.[94]

In this way, CGG works between the plateaus of meanings not in order to combine them into agreement. They do not try to connect the various logocentric and material meanings into a single unified story. Rather, they explore the tensions between different scenarios of relations of importance, making them all tangible in their tension of significations.

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. 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 encounter causes all the relations to happen:[95] 'what matters is in what

way the connection take place'[96] – as Dolphijn argues. In other words, what is important is focussing on how the relations happen and how they generate meanings. As apprentices, 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, that is about to transform us. In the moment when we strive for definition, identification of bodies without understanding and care for the implications of these definitions we fall into signifying power relations, and as Dolphijn reminds us, 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.'[97] In terms of CGG's practice, determining what becomes food happens as an implication rather than condition of the encounter, it is produced in the taste event in the form of a sign, as a risky search for new relations.

Affect as contamination implies that meaning formation is not just an epistemological, reflexive activity detached from living bodies. It is a simultaneously generative, ontological and speculative event. Affect forces comprehension of meaning as significance that not only has the capacity to change the internal organization of what we take as knowledge, but it primarily reshapes the very ways we produce knowledge and practice 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, but it may also destroy them and capture them into the universals of signification. Thus, philosophy and art become intertwined in their material practice of speculation through contamination. Since the existential meaning that affect generates entails that, depending on what becomes significant, relations can equally destroy, stiffen and fix those bodies, living within affect demands not only a different way of organizing the practices but also thinking about those who become contaminated and contaminating within them.

Contaminant H like hormones from my urine I swallow

Before I became abducted, I had to sign a form in which I was asked to denounce my capacities, presuppositions and my body to the Aliens in Green (Figure 14).

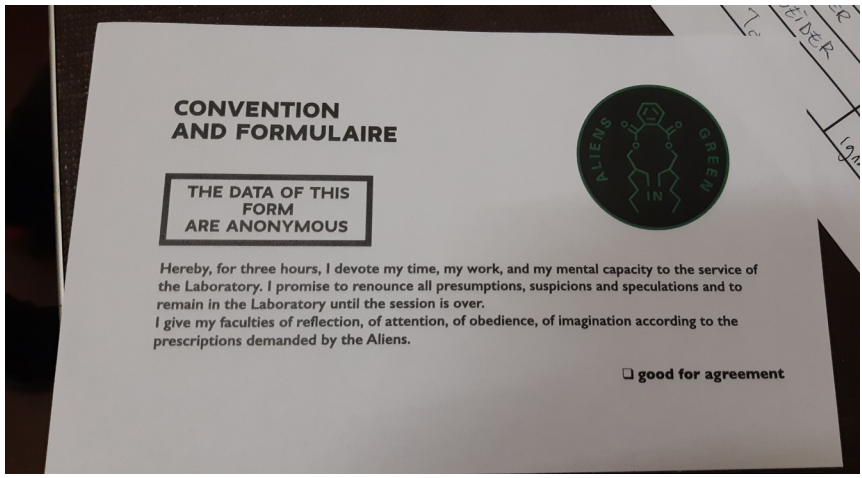

Figure 14 Consent form of 'Xenopolitics', a performative workshop on hormonally active agents, *Aliens in Green* at 'Blue Skies. Bodies in Trouble,' Essen, Germany, 12 July 2019. Photograph by A. A. Wolodzko.

I could not take any pictures and I had to leave my possessions outside. Upon signing the paper, I needed to drink a glass of water and wait with other applicants in the waiting room, where I was to dress in plastic disposable clothing. On the wall of this waiting room, there was a screen projecting a video where the aliens were speaking in a sound that escaped identification: 'Welcome. You've been abducted by the Aliens in Green. Our intentions are benevolent. We are cultivating the art of combinations. We are here to recompose the commons in this world we no longer know. We, the Aliens in Green, are agents from a planet turned laboratory.'[98]

When I was finally called to enter, among many labour tasks and instruction, I saw a space filled with tables, lines and gestures that instructed what to do, where to sit and stand. There was a strange silence and only a murmur indicating fulfilment of the tasks. We were not allowed to talk, those who were, were immediately hushed by a firm voice. While silently fulfilling the assigned labours of cutting the vegetables and fruits, and reading about their properties and use in the global market of food exchange and manufacture, the participants were checking upon each other, looking for some common understanding and purpose. But the task had to be fulfilled, the food had to be prepared and information digested so I focused on the experience and labour, after all knowing that I am part of this event now.

At some point, I was given a ruler, a lighter and a glass jar. I was instructed to go to the indicated toilet behind the green curtain, to urinate into the jar

there and then to measure the distance between my anus and the beginning of my genitals. After this, the urine was taken into the process of hormonal extraction and my measurement was to be made visible for all participant in the graph indicating where I am on the spectrum between female and male sex bodies. I felt anxious, not only because I had to undress and pee in the room filled with strangers separated only by a textile, not only because I was not sure if I even had any urine in me, not only because I had to measure myself with my pants down but because I had to confront the chemistry of my fluids and measurement of my genitals with the abstract norm that the graph demanded. *Is my body female enough? Is the level of my hormones female enough?* – these were thoughts that flushed me. And while experiencing the growing anxiety in the face of my confrontation with the norm, with the standards rooted in the heteronormative regimes governing my body and now clashed with its leaky porosity, I looked at the room of the xenopolitics kitchen where the smell of chopped food, plastic and urine mixed, and I saw me – I the Anthropos, the cis female, am just a construct of the regimes of normalization. Through stories of modulation, transformation and hormonal contamination of food I eat and products I use, of daily habits rooted in the politics of exploitation, colonialism, toxication and commodification, my body started to queer and contaminate itself – I was already an alien, a xeno. I looked down at my green apron I was given to wear with the sign of a hormonal molecule I did not know much of, and returned to chopping the oranges.

Aliens in Green (AiG) was founded in 2016 and it is a fluid collective of artists, activists, scientists and researchers with Ewen Chardronnet, Špela Petrič, Mary Maggic, Bureau d'Etudes (L. Bonaccini and X. Fourt), Julien Maudet and others who staged a performance of a tactical laboratory focused on xenopolitics. Each of the members represents a different focus and field, different questions and methods of experimentation that together contaminate each other in this constellation of the affirmation of differing. As they write about their laboratory on one of their posters that was part of *Xenopolitics#1Petrobodies*: it 'is a participatory action combining hands-on DIY science protocols, xenopolitical role-play and queering rituals to provoke a crisis of the body that leads to non-prescriptive subjectivities, in turn offering a kind of alien resilience called xeno-solidarity. The investigative laboratory aims to decolonize (endo and xeno) hormones, releasing them from an eco-hetero-normative, toxic, sex-panic discourse through a process of abduction, detection and recombination'.

Through the participation in the manual labour of food preparation, through reading about food politics and processes of its manufacture, transport

and storing, through games, exposure to scales and objects, protocols and architecture of space that is to make you become alienated from the ideology of autonomous self, the AiG becomes a pedagogical ritual of contamination. In the act of consumption, you join the processes of contamination and mutation, you become incorporated into the risky, already political and technological conditions of bodies. Here, bodies are revealed as being already a result of production and transformations, a result of what Paul B. Preciado named as 'a postindustrial, global and mediatic regime' that he calls pharmacopornography.[99] This regime that conditions our bodies governs and encompasses them through many processes of pharmacological pathologization that AiG in their laboratory exposes.

As Preciado argues, our bodies are the product of deterministic and essentialist understandings through the processes of 'semiotic-technical (pornography) government of sexual subjectivity'[100] where the heteronormativity is implemented and enforced not only through scientific epistemologies but also through social and cultural desires and their given meanings. The dubious success of this pharmacopornography lies, as Preciado maps, in a particular discovery of hormones present in urine. The possibility of harvesting hormones from living bodies and then synthetization of them for a more universal production and application allowed for ideological reinforcement of the heteronormative classification of bodies. Since a particular hormone started to denote a body's sexual subjectivity, the control and manipulation of that identity became thus possible through medical signification.[101]

Hormones, as biochemical messengers, solidified the understanding of a body in terms of a system of biocoded information. Here, hormone is thus, as Preciado argues, 'conceptualized as a tele-transmitter, the hormone implies transport, distribution, exportation, availability for extradomestic use, outflow, escape, flight, exodus, and exchange; but also reading, decodification, and translation'.[102] Hormones are thus not only an apparatus of codification of bodies but also a possibility of an escape from it – they are not only the technologies of identification and control but also possibility of transformation. Through the technologies of hormone synthetization and application, a body as an individual becomes thus decentralized into an apparatus, a technical network system conditioned by context, other bodies and their desires.[103] In the case of sex hormones, this apparatus, as Preciado reveals, is set up within colonial spaces of psychiatric and gynaecologic cliniques in which non-white pregnant bodies of women had been exploited for their urine being a primary source of hormone before the discovery of synthetization.

In their performance, the AiG maps therefore paths of hormonal contamination that is named in scientific discourse as the endocrine disruption, which is the disruption of the hormonal system that regulates 'growth, development, reproduction, energy balance, metabolism and body weight regulation'.[104] Our bodies have been now recognized to be exposed to these hormone disruptors throughout their lives, being an imperceptible part of our agricultural environment, consumer products, food, packaging, medicine and supplements. However, while scientists and researchers point to the juridical necessity to regulate the level of hormonal disruptors on the basis of an assumption of what is a 'healthy' and 'normal' body, AiG proposes to embrace the mutation. Rather than panicking in front of the hormonal disruption that would lead to strengthening the existing assumption of what is and how a body should look like, AiG asks how to live and navigate within an already contaminated body, how to practice and form ways of resistance as contaminating and contaminated by.

Malin Ah-King and Eva Hayward, when writing about endocrine disruptors and their influence on disrupting the notion of normativity, ask: 'Can we engender environmental responsibility without invoking anxiety that our most intimate reproductive environments have been infiltrated by an industrial world? How do we begin to think freshly and innovatively about environmentally induced sex and body changes without reinscribing gendered biases, sexual fears, and old prejudices?'[105] In view of the radical precarity that would not result in our desire for control and purification of bodies reinforcing ideologies of division and normalization, AiG proposes thus to embrace the hormonal disruptions revealing our bodies as already relational, complex and risky phenomenon. Their xenolaboratory embraces the xeno as alien with regard to norms defining our bodies and identities – alien, because conditioned by mutation and contamination. Mapping the regimes of pharmacopornography, they point to an alien condition of our bodies. In the face of such alien bodies we already are, rather than panic, they call for different modes and ways of practice that overcome the politics of purity and 'eco-hetero-normative' values.

The performance ended with a feast in which all the participants were to eat the food from our labour. All the disruptive properties of ingredients we learned about while chopping were now composed into a meal that we were to consume cultivating, in this way, the xeno and alien conditions of our bodies. An important part of this eating ritual was smelling and the consumption of our hormones extracted previously from our urine. While the experience of the smell of hormones, mine and others, revealed intensive material forms of

signification exposing us to intimate layers of our bodies, the swallowing soaked in vodka hormones opened up the condition of what is at stake and what the alien embrace demands. The materiality of meaning makes us all xeno; the xeno makes meaning always already material and situated in the relations of bodies and their implications. Aliens in Green revealed how the transformation of our bodies is risky, but instead of panicking and strengthening the ideologies of purity, they map how we need to learn how to live with these risks of transformations, because at stake are mutated bodies that already are, that we already become with. They show that what becomes significant is to embrace the xeno that forms ways of resistance and reclamation of power of our own always already multiple contaminations.

4

Contaminant O like organs of multibody

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 more than human, modulating voice that while laughing, screams: 'bunch of weirdos'.[1] 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. 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 to become meaningless – s/he/it becomes multiple.

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 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.[2] Where is her father? Her mother?

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, and 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. How to 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' laughter, however, coming out of the mouth with golden teeth, is a goofy, slightly hysterical, more than human, screaming: 'bunch of weirdos!'

The laughter of multiplicity

Bodies within affect as contamination contaminate, transform not only what we understand by those bodies that emerge from within their relations but also what kinds of meanings are produced within them. In the face of biotechnological practices that render bodies literally, materially multiple, we urgently need to find corresponding material conceptualizations in order to be able to sustain the practice of their contaminating relationality. We must be able to not only understand what it actually means to practice affect as contamination but also what it takes to keep transforming those practices according to the contaminating relations of significance. We must face the implications of contaminating bodies, once the conceptualization of bodies' agencies and meanings change into mutating multiplicity. As *Contaminant O* exposes, we do not know how to face with the bodies in their changing and fluid multiplicity that affect as contamination implies. But rather than panicking in the face of the multiple, we need to map the implications for conditioning the multiple ways of its practice.

Deleuze's writings on multiplicity and difference provide a sense of a conceptual path that we could take when grasping the phenomena of multispecies. As Deleuze and Guattari write: 'Each multiplicity is symbiotic; its

becoming ties together animals, plants, microorganisms, mad particles, a whole galaxy.'[3] 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. We need to confront the inevitably pragmatic question of how thinking about multibodies within affect demands dynamic practices and the politics of the multiple. For Rosi Braidotti, such politics that would need to embody the non-unified and thus nomadic subjects in its dynamic movements and capacities has a particular expression of transformation. As she writes: '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!'[4]

In *Layer Cake,* we encounter 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 and more. 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 are 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.[5]

In that sense, there is no unity of the multibody, as Deleuze with Guattari would argue,[6] 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 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 as one even if changing? 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.'[7] In *Layer Cake*, the laughter is a way 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 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 laugher 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 of affect 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.[8] 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'.[9] 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.'[10]

Laughter becomes an expression of intensity, of difference that 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 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.[11]

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.[12] Laughter becomes rather a mutation and waste – something that has been cut and becomes 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. In that sense, 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, and 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'.[13] The laughter of waste is negation of negation by affirmation. It is through waste that these bodies transform into multiplicity allowing, in turn, to think from within it. 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'.[14] Laughter of waste is not thus friendly and agreeing. 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 that are to emerge within new medical and biotechnological practices demand new thinking about dynamic subjectivity that these technologies may also foster. In that sense, in order to practice the multiple, not only the acknowledgement 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.'[15] 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 acknowledgement 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,[16] Deleuze describes genes as a relational rather than essentialist 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 differenciation of their parts, according to rhythms that are precisely called 'differential', according to comparative speeds or slownesses which measure the movement of actualisation.[17]

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.[18]

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.'[19] In this way, the way to think difference for its own sake, independent of the logic of identity, of the Same, becomes through relation – through what we now call laughter, but which carries the characteristic of affect understood as contamination (*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 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.*[20]

In the waste of mutilation, the expression of laughter is the flow of intensities. Here difference escapes identity, and 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 ressentiment 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 of transformation. This logic of multiplicity is driven by the tension of an encounter with what is different, rather than the same, that 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.'[21] 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 problems of control and capture performed by the logics of significations.

When practicing multiplicities and their agencies within movement of contamination, we are not interested in the metaphysics of subjectivity, that is what the subjectivity of multiplicity 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*, we need to focus 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 as contamination. It is a question of bodies as multiple asking for recognition, survival and thriving. 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, risky, processual – contaminating – character of multibodies that can not only survive but thrive.

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 and live joyfully? How can we practice laughter as the politics of multibodies that we are within affect as contamination?

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 acknowledgement of its multiplicity, the law, based on a presupposition about fixed and autonomous identities, becomes insufficient, unable to exhaust all the complex 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? This is a risky question entangled with the politics of race, sex, identity, class and social inequality where the logic of rights determines and gives means for life dignity. Therefore, it is important to not only question the philosophical presuppositions it carries but also imagine the material implications and possibility to think and practice bodies otherwise. In other words, how can we maintain the continuous state of laughter, where bodies can flourish in the mutations? How should we practice bodies within affect as contamination? 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 bodies, is rethinking the notion of personhood.[22] After all, it is the idea of personhood within politics that helped to manage and control bodies throughout 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 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.[23]

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 care 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'.[24] 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*.[25] 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'.[26] The notion of person was thus not inherent to all human beings, but only to those endowed with political and social rights, with regard to their demonstration of possession of rational capacities and spirituality.[27] In that sense, political rights are not inherent to bodies, but to the idea of personhood that these bodies may be subsumed.

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 are 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',[28] 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'.[29] Thus, when any form of an 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.[30] 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'.[31] 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.[32] 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 not only who has rights and who does not but also how the decision itself can be already commodified and controlled. Especially, in the context of genetic, biomedical and digital privacy, the transformation of the notion of personhood from the social value of 'privacy seen as secrecy or concealment'[33] to the economic value of right to control and own one's data becomes the most vivid. When the discussion on the personhood is grounded in the essentialist belief of unifying one's identity and rights according to one's DNA, and when DNA function as

a piece of information that can not only by read but also shared and sold, the meaning of personhood becomes only valid within the capitalist discourse of economic profit exchange. A stark example of commodifying practice that the logic of personhood fosters is Direct-to-Consumer Genetic Testing (DTC). Here, a person wanting to know about her genetic makeup and diagnosis becomes a consumer undergoing an online transaction:

> The consumer (. . .) receives a testing kit at home to collect a biological sample (which, depending on the test, usually comprises of an accumulated volume of saliva or hair). After sending the biological sample to the company, genetic material is extracted from it, and the DNA is analysed. A few weeks later, the consumer is provided with the test results, which are sent to him/her either via email or upon accessing a secure website.[34]

The logic of personhood accommodated the growing practice of privacy self-management over one's believed personal information, that you can manage your rights over your living body as a consumer enforces the economic and political strategies of governance. As Gordon Hull argues: 'privacy self-management functions as a technology of neoliberal governance, by inculcating the belief that subjectivity and ethical behaviour are matters primarily of individual risk management.'[35] The enforcement of the logic of personhood, in this way, leads to the presupposition of the ownership of the body, where the body becomes to be a thing ready to be managed.[36] Moreover, either the notion of the person or the pursuit of going against personhood as de-personalization channels the logic of relation of exclusion governed by separation and subordination not only between humans but also between humans and other species' bodies and lives – those who can be owned and those who own.

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 logic of exclusion that marks the commodifying practices over the bodies, the politics of multibodies need to respond to the affirmative way of practice. 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. 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 as contamination. 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.[37] Fox's multiplicity does not aspire to culminate in or reach some desired form or identity.[38] 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.[39] 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'[40] – 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 happening.[41] Therefore, the multiplicity that we already are demands a rethinking of agency in terms of Barad's notion of 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.[42]

Lem's creation of the multiplicity of Fox generates the imperceptibility of the continuously mutating layers using gestures, voices and the body's movements. In this way, the *Layer Cake* 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 contaminating 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'.[43] 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, where thinking is driven by the logic of a constant opposition and reference between the first and second persons, 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'.[44] 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.

The new logic of the impersonal requires us 'not to think the neutral [. . .] but rather to think in the neutral'.[45] 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 'the ability of bodies to form assemblages with other bodies'[46] 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?'[47]

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. Affect as contamination fosters an approach that responds 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 to multiply 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.[48] In other words, politics that sustains affect must resist stabilization. It would have its characteristic as outlined in *Countersexuality Manifesto* by Paul B. Preciado, where the only way to destabilize the normative binary logic that organizes our bodies into identities and sexes is through multiplication of body-s mutations. Through continuous creative invention of organs and experimentation with their functions, where bodies, rather than recognizing themselves as clearly defined identities and sexes, see themselves as living, mutating bodies, we practice the politics of what Preciado calls 'countersexual society'. Following Preciado, such politics of mutating multiplicity becomes a 'planetary somatic communism',[49] where rather than constructing practices of bodies, according to their given identities, we experiment and multiply their functions in the continuous strive for invention of new forms of resistance against stabilization.

Overcoming the *bios*/*zoë* dichotomy requires thus 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'.[50] 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, non-binary dimension hints rather at the notion of belonging-with that is beyond species and sexes division. As Braidotti's 'bio-centred egalitarianism' and Preciado's 'somatic communism' show, the new relationship with the non-human through the multiplication and transformation of the multiplicity of the body can be practiced. The challenge is how not to stabilize and control the multiplicity and its contaminating relationality due to its risky and precarious character. And most importantly, what is this risk and what are its borders. How do we define what and when something is risky and for whom and what?

Contaminant X like the xeno whose voice whispers transformations

It was dark at first, on the ground there was only an empty chair illuminated by the white square screen behind it. I was sitting on my sofa, in my living room, watching this through a live stream. It was on 7 October 2020 at 8 p.m. CEST – it was the ninth month of the pandemia of Covid-19 – there were thus only a few people present live in the audience of the Kapelica Gallery in Lubljana where all took place, the rest could watch this performance lecture titled *Xenological Entanglements. 001a: Trying Plastic Variations* by Adriana Knouf live online.[51]

The performance begins with the presence of an empty chair. We, the online audience, first hear a voice telling a story of not belonging, of wanting to escape and of changes and endured intoxications by a spironolactone pill that suppresses the production of testosterone and by estradiol patches to provide exogenous estrogen. A voice continues telling a story of expectations of transformation, of the influence of these chemicals on a body, of frustrations upon the commodification and framing of a body according to essentialist belief in a causality between a chemical and change it is said to cause, and of a body that always already escapes the capture and prediction by its own process of becoming. And yet, as the voice reveals, she would rather die than live without these contaminations. While the voice admits to her feeling of not belonging to life on earth, of feeling disconnected with the 'fellow human', 'with a body marked as a boy', and with pathologization of her psyche as ill, the artist, Adriana Knouf, enters a room, sits on the chair, shedding a shadow so that we can only see a dark form of her posture. She continues, telling about how, when being only ten years old, she was trying to connect with stars, with the outer space wanting to be taken, knowing she belongs with 'them'.

Her voice vibrates now, modulates and whispers telling about the training she must do as a transwoman in order to sound 'less' and 'more like'. 'There is no stable understanding of how high the voice needs to be to be heard as a particular gender.' As she explains – 'the matrix of capture of the voice relies less on determinate scientific boundaries and more on qualitative, tacit understandings.' The identification of a sound is thus a matter of habits that solidify the variety and situated experience of its nuances and differences. This means that a voice is 'mutable', capable to be changed and changing but not without a labour of self-experimentation. Knouf explains her practice of voice mutation by repetition of the Harvard Sentences 'originally written in the 1960s as part of psychoacoustics research, the 720 sentences came to be used for the testing of telecommunications networks, including telephone lines and satellite links'. She thus tests her voice, practicing the change by reading the original Harvard Sentences and then repeating them yet with contaminations: 'Her purse was filled with useless trash. Her purse was filled with books and a mask. Her purse was filled with stardust.' Encountering the misogynist signification in this list of phrases, she modulates and contaminates their signification. Through the change of her pitch and tone, and through repetition, time and bodies flicker: 'The hostess taught the new maid to serve. The hostess taught the new maid about the whispers. The hostess taught the new maid to sabotage. The hostess taught the new maid how to love.'

I was grasped by the melody and slow yet rhythmic movement of change, by the softness multiplied by polyphony of the tone, giving witness to the materiality of transformation. Each sentence mutated through the sound that escaped capture and through the signification that opened up the possibility of thinking otherwise. This wave of mutation, the speed and rhythm of repetition that the labour of practice filled with distortion, struggle, warmth and softness demands, seemed unstoppable. I was travelling with the voice through transformations of time. I was within the movement of the transformative witnessing. Then, suddenly, the voice was broken by the long and slow whisper that turned itself into the shimmer of rustle of the sound that speaks slow and prolong: 'Aiiiii . . .'. This everlasting 'I' that changes into the wind released from the tight throat wanting to speak up, opened up the unexpected multiplicity. It was 'I' about which Michel Serres was writing as indeterminate, as multiple because belonging to anyone: 'a tree, a river, a number, an ivy, a fire, a reason or you, whatever. Proteus. I think, therefore I am Nobody. The I is nobody in particular, it is not a singularity, it has no contours, it is the blankness of all colors and all nuances, an open and translucent welcome of a multiplicity of thoughts, it is therefore possible.'[52] At that moment, my own throat tightened, and my 'I' was suddenly not mine.

Then the setup of the scene has changed, and the sound of transformation went silent. Knouf is now standing in front of two mirrors, big enough to reflect her whole body. She starts to undress herself, carefully, meticulously folding each of her garments. Once she is naked, she starts to remove plasters from her body glued on her underbelly. Each plaster leaves a visible trace of glue, she thus starts to remove it, a bit hastily so soon her skin becomes irritated and red. This labour takes some time, the glue proves difficult to remove. After a while, she takes new plasters and glue them back on the same place from which she removed the old ones. She starts to dress up, putting finally a disposable coat, a mask and a face shield. She starts to distribute plasters to the audience present in the space using a long tweezers and maintaining a required during the pandemia of Covid-19 physical distance. She then explains that she needs to repeat this replacement of plasters with estrogen two times a week for the rest of her life. It is a painful procedure, risky but she chose this, she reminds the audience.

I could not fall asleep after this performance for quite some time. I was shocked by the amount of labour and its materiality, medicalization and its signifying regimes that comes with the gender transition. I felt the pain of not belonging, of carefulness that monitors each move in order to fit into the logic of order and identification. But then, while I was tossing in my bed, repeating the scenes and whispers of Knouf in my thoughts, a hot shiver went through my whole body. I felt embarrassment and shame upon my own feeling sorry, upon my judgement about one's capacity to contaminate, and I heard her voice: 'I choose to contaminate my body this way, with the estrogen that transforms my body into something other, something not entirely male and not entirely female.'

The recognition of the relationality as joyful, as relations that allows to flourish and sustain the body's capacity to mutate and thrive, cannot be judged and controlled by the observer. Contamination is risky because it demands a position of a participant. Contamination must be affirmed and be conditioned by the bodies in relation. Contamination must be embraced in order to sustain and allow bodies to flourish rather than be controlled by the gaze and idea of what is assumed to be the norm and value. Despite the fact of recognition of the medicalization of the body into a gender dysphoria, of branding the body by the plasters of estrogen representing an industry and technologies of commodification, Knouf embraced the contaminations that condition her body and allow her to thrive as xeno and trans she already have been.

To practice bodies within contamination is not an alternative to what is, to the medicalization, disciplinarization and commodification through technologies of sexual, social, cultural and political production. To constitute an alternative

would presuppose the separation, a stable existence of a status quo, of 'the norm', of that what is perceived as given – Knouf's contamination in not an alternative. Practicing bodies in contamination is rather a transformation of that what already constrains, governs and is defined as the norm. Contamination is not of that what is 'outside' and it is not 'in' of that what would precede, but rather it is already with and in – within. Here thus, to contaminate has another sibling word that signifies the necessity of transformation from within – to queer.

As Mel Y. Chen points, the use of an etymology of the word 'queer', when functioning as an adjective, denotes 'strange, odd, peculiar, eccentric . . . suspicious, dubious';[53] as action, it means to ruin and to spoil, it also functions as an indication of both homosexuality and criminality. Through reclamation by activist and theories, queerness and queer identities denote thus not only nonheteronormative sexualities but also a 'probing beyond the bounds of normativity, taking on the load of rejection, resistance, negativity, indiscretion, quirkiness, and marginalization'.[54] As Chen points out, queer is not an alternative to the essentialist, normative logic as this would only legitimize the righteousness of normativity. What queerness does is the decentralization and delegitimating of normativity in the first place. Ontologically, we are already multiple, changing and fluid bodies, we are already queer, which opens up new challenges for a political and social understanding of identities and bodies.[55]

Knouf's voice opens up not the possibility of change and transformation, since that is already happening. Rather, Knouf's voice affirms and reclaims the transformation, indicating and conditioning forms of its practice. Eliza Steinbock named such an affirmation of trans as not bounded by sex and gender, following Susan Stryker and naming it in terms of an 'aesthetics of corporeality' that escapes normalization. Here, trans, next to the affirmation of change and transformation, takes onto-epistemo-ethical dimension where it becomes a process of experimentation 'with the political urgency of how degrees of difference, incoherence, and oscillation are expressed as viable'.[56] In other words, transbodies can not only contaminate the binary of sexed and gender but also ways of their practice while manoeuvring between the given norms and borders of that what is accepted and counted as change.

In order to visualize and metaphorically capture the contaminating and vibrating tension of relationality that a transbody is constituted by, Steinbock proposes a concept of shimmering images. As she explains it following Michel Foucault, Gilles Deleuze, Susan Stryker and Steven Shaviro, she 'employs shimmer as a noun akin to sparkle or flash, the verb shimmer sometimes translates as scintillate or glimmer or shimmering as a modifier to describe change in its

alluring, twinkling, flickering form'.[57] Steinbock's notion of shimmer is mainly analysed within the cinematic image of transbodies as an aesthetics of change, and as such it can also be applied to understand the performative image of a voice of Knouf. In her modulation, exercise and repetitions, Knouf's voice indicates a passage of transformation happening – her voice performs shimmering. Shimmers change constantly, they are not to be grasped but rather experienced and affirmed as a way of affirming nuances that blur the clear-cut boundaries.[58]

Transbodies' transitions are not from one state to another, these are rather processes, intensities of change that are conditioned by existing political, social, cultural, economic and technological significations. Trans is not a state, it is a movement between the state of things and bodies that not only contaminate but also that are contaminated by this very movement. 'Trans ontologies are process-oriented, rather than object-oriented.'[59] In other words, trans ontologies are within relation of contamination, they practice affect as affectus – relations of movement and transformation. Acknowledging and practicing differentiation between affectus and affection, as discussed in Chapter 2, has thus significant because onto-ethical implications for transbodies. As Steinbock notes, transbodies are often stereotyped as being illusory or unreal, they are often accused of personification, concealment or revelation and violence with regard to heteronomy. The rooted prioritization of the perception and practice of bodies according to a given state before their relationality and transformation, in other words, according to affection (state of things) before affectus (relationality and passage of transformation), results in stigmatization and violence against trans persons. The possibility of transbodies being included into social and cultural norms is only recognized when identified and captured by technologization of sex, their medicalization. Transbodies can be only accepted when the movement, contamination and mutation of their body are framed in the logic of clear-cut boundaries of that change, when their mutation is grasped by the regimes of signification, be it the diagnosis of psychological disorder, asexuality and hormonal imbalance.[60]

As Preciado argues, the framing of transbodies within the logic of comparison with the norm, within the transition always connected to a state of departure and aim, within the processes of medicalization, identification and politicization of that transition, reveals the production of bodies through the biotech industry and regimes of pharmacopornography. Here, bodies are produced according to the given idea, they are captured and governed according to their capacity of production. Outside this logic, as he states, outside the logic of 'sperm and egg carriers, there are neither men nor women, just as there is neither heterosexuality nor homosexuality, neither ableness nor disability',[61] just bodies. Since, as

Preciado noted, biotech aims to stabilize bodies by incorporation into its own logic any form of contaminating practices.[62] Transness thus carries a particular tension of being another form accepted within technologization of identities body just as a possibility to contaminate these very identities and thus escape normalization. Knouf staged her performance within the capture of this tension, her illumination was a form of fitting into what she called 'another square': 'To identify as transgender is the first step towards another square in this matrix.' As she states, 'even though sexual identities continuously proliferate, the matrix itself defines the boundaries of the possible. The price we pay for purportedly non-normative gender and sexual behaviors is to remain in these matrices. It is the price we pay for the privilege of transitioning.'

We already practice bodies of trans daily, as shimmering, contaminating, flickering and manoeuvring between given norms. And we all pay some price for being able to do so through negotiations and endurance of implications. Yet some of us pay a bigger price than others for affirming and practicing this change that conditions us – some bodies challenge the norm 'too much'. We can rethink the conditions for multibodies transformations within political, social and cultural realms in a way that would affirm not only a change of state but the intensities and difference of that change, but the problem is: How will we condition its practice so that is equally accessible to all bodies?

At the end of her performance, Knouf asked the participant present in the space of the event to open the bag with the hormonal plaster she distributed, and to glue it on the vocal cords. She then started to tell a sort of spell that through repetition of her voice was to materialize the transformation. As if in a magic ritual, she initiated a contamination:

> Feel the potential for molecular contamination that the patch symbolically provides. Absorb the simultaneous powers and limitations of a molecule for change. Consider what, right now, demands contamination–in yourself, in the world – so that it can become other. Know that contamination requires effort and is not without risk. Purity, though, is a myth, and only through contamination can we experience how to live differently within a world that is not ordered by tidy boxes. Use this patch as a symbol to guide you in your own contaminating practices.

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).[63] Till 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.[64] Although institutionally in its infancy, the first documented faecal transplantation, used to treat food poisoning and severe diarrhoea, took place over 1,700 years ago, in China, and was performed by someone called Ge Hong.[65] 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.[66]

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.[67] 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, Clostridium Difficile infection.[68] The procedure aims to restore the balance of the gut microbiome, which are basically bacteria, archaea, fungi, viruses, protists and microscopic animals.[69] The transplantation can be carried out using a nasogastric or nasoduodenal tube (insertion through the nose), a colonoscope or enema (insertion through the rectum) or by ingestion of capsule (insertion through the mouth).[70] 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. In other words, bacteria, rather than harmful, are embraced as enriching and 'healthy' contaminants. 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.

In 2016, it was said that 90 per cent of human cells belong to these microbes,[71] 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 gut microbiota are considered to influence and shape our feeling and thought,[72] 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, contaminations that happen daily through our human and non-human bodies we not only get new microbiota, but, as some argue, we become that microbiota[73] – we appear 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 that we all become with. The present medical discourses on microbiome seem unable to grasp the radical political and cultural shifts caused by their findings.

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'.[74] 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.[75] The necessary entanglements of microbes with the immune system have been recognized as making microbes not only as other bodies residing in our body but rather an 'essential part of ourselves'.[76] Such mutually symbiotic relations

between our bodies and microbes lead to the conclusion that 'microbiome not only affects us but is in fact "us"'.[77]

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 twenty-eight 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'.[78] 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.[79]

With such a strong co-relation and coexistence, there are problems of personhood and identity, property and privacy that need to be rethought.[80]

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'.[81] 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 has an actual material influence in shaping who you are than a DNA sample. Moreover, since the 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 identity inquiry into what the body

is, to the Spinozian question of what it does and how we should practice bodies. The urgent question that affect as contamination poses is thus how, in the face of such ongoing mutating and relating multiplicity, can we induce change into politics of their practice?

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.[82] CRISPR has reinvigorated not only the discussion on designer babies and human enhancement,[83] but also the fear of heritable changes in the genome that this technology implies.[84] However, with the new findings on the role and function of microbiome we are already susceptible to cross-generation modulations. Focused on the 'biotechnological', 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 microbiome-scans before you are allowed to enter a building, or before you are accepted to some institution, granted insurance or simply served in a shop on the basis of test that would indicate not good enough makeup of microbiome within your body. And while I am writing this now, we are in the time of Covid-19 pandemia when some of these practices have been already implemented, where obligatory tests for Covid-19 and scans of temperature, surveillance and monitoring, lockdown and quarantines are already common practices, often with the help of police and military enforcements. However, it can be otherwise. As I am writing this book, different scenarios of living with viral contamination are only unravelling, we can, however, speculate on the bases of the multibody that we are, a different way of thinking and practicing multibodies. We could build houses with an in-built pet microbiome. We could design educational system not only around maths and languages but also with questions and ways on how to care for plants, soil,

viruses and bacteria. We could build microbial, multispecies pedagogies where thinking with and becoming with more than human are part of knowledge-making practices, part of survival and thinking with relations of risk. The cultural, social and economic relations might be practiced in a way that could implement knowledge of how to generate new microbiome relations and alliances, rather than fostering neoliberal self-care and autonomous self-improvement standards, that rely heavily on racial, gender and class hierarchies.

However, the scholars of HMP, instead of initiating new material 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'.[85] 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 and practicing the complexity and mutability 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, contaminating 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 idea that urges us to take responsibility for maintaining the health of the super-other that is the microbiome is just one example.[86]

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'.[87] 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'.[88] 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 acknowledgement 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.[89]

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 and designed encounters may be just the start in the era of 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.[90] 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.'[91]

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, how we practice our daily 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? The mechanism that drives multibodies and which itself can be considered to condition the unconditioned become thus the immunity of the multibody.

Conditioning a multibody

Having considered a different logic, mapped by Deleuze as difference and Karen Barad's understanding of bodies in terms of intra-action dynamics, we already have the tools to define the condition for multibodies' contaminations. We can construct concepts beyond the polarized politics of exclusion and along the affirmation of tension which Jacques Ranciére defined as dissensus, as 'not a confrontation between interests or opinions [. . .] [but as] the demonstration (manifestation) of a gap in the sensible itself'.[92] The question is whether we dare to not only detect a multibody but mostly think about its conditions and care for its multiplications while facing with all the risky implications of their contaminations?

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.'[93] She argued 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.[94]

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',[95] Haraway notes. Its physical characteristics are that of an open system, which, although dynamic and mutable, functions in order to maintain coherence in the necessary ongoing relationality. 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.[96]

Looking thus at immunity as a relational open system helps to understand the ways of how can we change our understanding of self into multibody, in order to be able to practice it and care for it. However, as Esposito noticed, in the pursuit of arrangement of our body into the logic of immunity, we cannot ignore 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'.[97] Such a relation, inscribed in the understanding of immunity, is based on negation; it is driven by negation and succeeded by it. However, bodies within affect, multibodies within contamination, because of their uncertainty and risky character, cannot rely on fixed rules of negation – we do not know in advance what bodies can do so that we can exclude a particular one before it harms us, for instance.

How, then, would a relation of immunity that is not based on exclusion actually work for conditioning of multibody? 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 identity or community that it is designed to protect, but rather works for the impersonhood 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.[98]

The change in our understanding of the immune system can thus be done 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 are what drive 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.[99]

In other words, once we overcome the view of the body and self as a closed system, the notion of immunity changes its function. 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 realized how the outside penetrates the inside at the ontological level, rendering the inside-outside distinction meaningless. The multispecies bodies establish a multilayered, 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 becomes its relationality and capacity for transformation. In other words, we can now say that contamination 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.'[100]

The actual methods of practicing 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 a multibody requires us to keep adding relations while caring for the multibody's capacity to continue to multiply. It is a difficult and risky 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. It thus demands a different sensitivities and perceptions, it demands slowing down in order to notice implications of contaminations, in order to learn multiple terms of their manifestations. Understanding thus how an immunity of the multibody may be practiced can be seen by examining how this tension between multiplicity and identity, between the risk of multiplication and urgency of its care, is present within the works of bioart.

Such experimentation with different perceptions and methodologies that affect implies has been already practiced in art. 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, which systematizes and classifies the bacteria of our body in small multiple Petri dishes, forming 'a complete portrait' of the human body, seems to be a representation of multiplicity. The work is an affirmation of the discovery of microbiome that composes human body but without considering the implications it fosters. 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 Bäumel'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 bodies' multiplicity. In her work, she creates spaces not only for the visualization of the bacteria through their growth but also for their care. By bringing the invisible layers of a multibody into vision, she maps the ethics of scale: of how much should we and are able to care for the multiplicity to multiply. By securing spaces for transformations, she makes tangible the encounter with the tension between the habits of self and the layered and risky encounter with multiplicity. Her living sculptures presented in the art gallery are uncomfortable, they reveal and force us to face the risk of our continuous growth and multiplications. Bäumel, rather than celebrating the multiple that we are, stages encounters within it, where she confronts the visitors with the layers and scales of our sense of responsibility.

Her *Expanded Self II*, 2015 (Figure 15), a project to grow your own bodily microbiome self – a huge transparent dish filled with agar, onto which the artist

Figure 15 Sonja Bäumel, *Expanded Self*, 2015. Photography C. Eeftinck Schattenkerk.

imprinted her whole body – was one of such an encounter that confronted with the struggle of living within the multiplicity. Exhibited in the 'Anatomical Theatre' at the Waag Society in Amsterdam as a part of the exhibition 'Gare du Nord' in 2015, the work has been removed from the exhibition before its finissage. The reason behind the expel was that it literally started to overgrow the Petri dish and contaminate the space with the smell and attracted to it flies. In the face of the question posed in the report on the website of the Waag Society, namely: 'What is now the legacy that the artwork leaves behind? How is its nature being determined?',[101] we are confronted with a much more ontologically disturbing realization: the fear of the uncontained. In the face of the contaminating multiple that Bäumel's work practises, we act and make decision in order to protect the borders and identities we assume are and should be fixed.

Nevertheless, the easy fascination with the newly discovered symbiotic nature of bacteria and the relational character of our bodies, without rethinking of the actual implications and challenges, has exploded into numerous artistic projects and designs for textiles, clothing, tools and furniture that are 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, that is, that in order to be encountered life must be commodified, turned into a sphere of understandable *bios*.

Projects such as Suzanne Lee's *Biocouture*[102] and Aniela Hoitink's *Mycelium Textile*,[103] which use bacteria and mycelium to literally grow garments, or Jalila Essaïdi's *Mestic* that transforms manure into materials such as plastic, textile and paper[104] showcase a new generation of 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. In the face of the radical influence of microbiome on bodies, the tendency is thus to appropriate its capacity by means of control and signification. For instance, the project of *Microbial Self* (2019) by Valerie Daude,[105] that is about designing a mask that would indicate through change of colour and shape the composition of your own microbiome to others, not only fosters the desire for control of microbiome, but mostly to implement new ways of its surveillance.

Biohacker Raphael Kim already predicted in 2015 in his project 'Peck as You Go'[106] (Figure 16, 17, 18) how our microbiome can function within the monetizing system. Kim speculated on the possibility of resistance against centralization of monetary system through mutating and transformative multiplicity of microbiome. In his tongue-in-cheek project, he tells a story of how our practices and intimacies

Figure 16 Raphael Kim, *Peck as You Go*, 2015. Copyrights Raphael Kim.

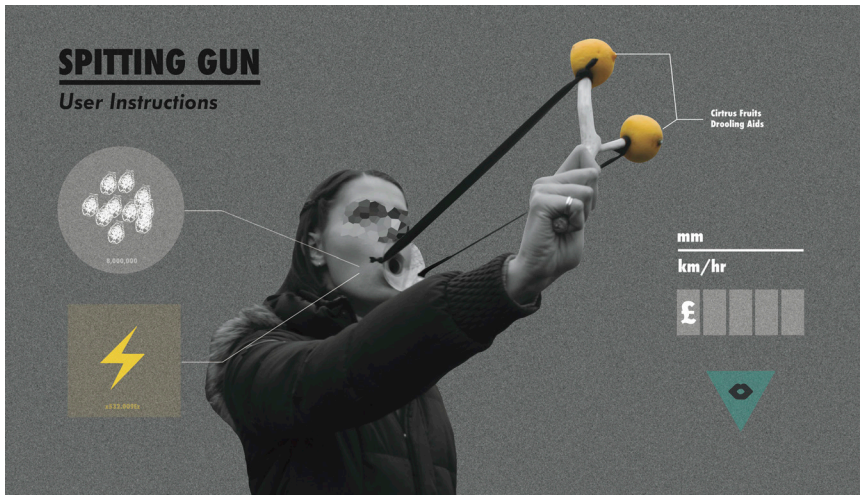

Figure 17 Raphael Kim, *Peck as You Go*, 2015. Copyrights Raphael Kim.

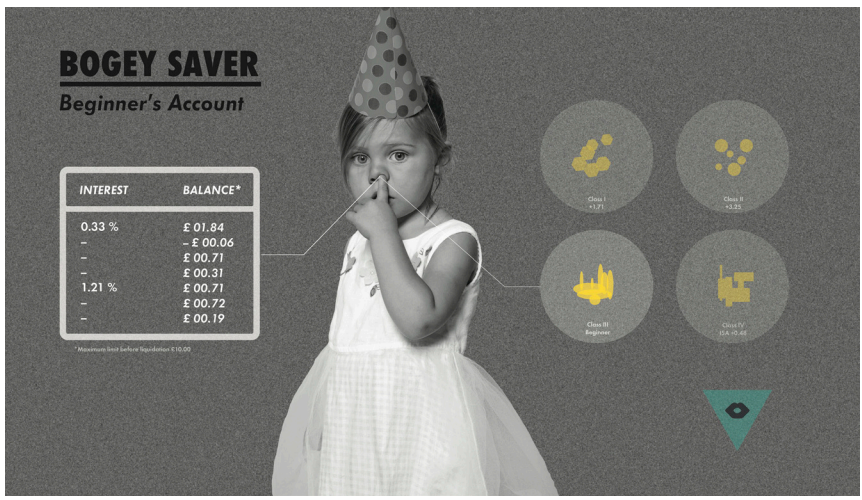

Figure 18 Raphael Kim, *Peck as You Go*, 2015. Copyrights Raphael Kim.

might change, once our saliva will become a biological currency. When your spit is a commodity that can be remotely controlled and monitored, how far are we ready to change our behaviour in order to save or protect our finances? Kim pictures thus a scenario that forces us to face this simple yet unsettling observation: when we strive to commodify the mutating multiplicity of microbes that we are with, we are not only changing our economic practices but also turning ourselves into commodities – we thus also change and transform ourselves. The urgency is thus

to ask whether we want these transformations and whether are we ready to face their consequences, live with them and as them.

Multibodies demand the creation of relations of tensions. Following the method of non-dialectical immunity, practicing those relations of contamination cannot destroy the s/he/it multiplicity, but rather, through multiplication and openness to new relations, it must enable further joyful multiplications and transformations. The creation of spaces of tension of multibodies, while enabling and caring for further transformations of these bodies, is the immunity method of multibodies politics – microbiopolitics

Contaminant A like the agency of microbiome security

How to live when our bodies not only contaminate each other but when their leakiness and porosity constantly reveal information about you, even the most intimate and sensitive that you would like to hide? What would you do, if the list of your daily encounters that you are contaminated by is stored somewhere, and might be used against you? Would you protect yourself? If yes, how would you secure your contaminating and contaminated body – by compulsive cleaning, by wearing special clothes that would prevent any leakage?

In the time of the Covid-19 pandemia, the fear of the multiple, of the viral contamination imposed already many mechanisms of universal disinfections, separation, compulsive cleaning and monitoring of bodies through apps and new technologies of surveillance. Through graphs, numbers, prediction, lockdowns and reinforced borders, we monitor multibodies spread. But are these methods suitable for our multibody? Tracking, works on the presupposition of identity. For Covid-19, it revealed the abuse of privacy and possibility of piracy and bioprospecting. The consideration that once you know what to look for, you can point it out, distinguish it and extract it cannot really work, since how to know in advance what a particular body is. The method of destruction might be the most effective but in the face of killing all what might harm you, you also might kill what enables you to live. Many researchers already map the correlation between the variety of microbiome that is made poor due to universal disinfection and sterilization of spaces with the raise of Covid-19 infections, for instance.[107] Another, the most controversial way, that reminds the logic of 'herd immunity' introduced by some countries in the first months of pandemia allows a free spread of the virus and contamination. This method calls for allowing for infection of a large population in order to gain immunity. Such notion of immunity, however,

operates according to the presupposition that bodies do not mutate. Most importantly, it expresses the necropolitical turn in the management of bodies that protects the health of chosen bodies while conditioning the necessary death and violence of others.[108] Neither of the methods seems thus satisfying to practice the multibody we already are.

Some ideas of practice of multibody with an understanding of its risky and precarious character, however, have been exercised through a project done by an artist Emma Dorothy Conley in collaboration with Guus Roeselers, a scientist researching microbial ecology, genomics, and systems biology of the human gut. The *Microbiome Security Agency* (MSA) 2015 (Figure 19) is a project that proposes another way of practicing multibodies. Instead of following the logic of exclusion, which fosters the fear of losing the autonomy, control and mastery because of the conviction that, without biopolitics we will enter a total chaos of dehumanization, MSA 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.'[109] 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 from each other. The project does not negate or criticize, but rather exposes the multiplicity by multiplication and transformation itself.

Figure 19 The Microbiome Security Agency, 2015. Copyrights Emma Dorothy Conley.

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 practice is quite different. Rather than keeping laws and old categories that express the historical role of immunity, MSA creates ways of acting within continuously contaminating multiplicity. Instead of the antiseptic trends that have dominated our biopolitically governed cultures, we obscured the convenient borders with an omnipresent multiplication. Through experimentation with tracking and destruction, they found obscuration of the skin microbiome by creating an 'Obscuration Solution' from a diverse selection of bacteria[110] to be the most attuned to our multibodies.

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 bacteria. 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.[111]

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'.[112] Whether such an obscuration works when applied to the skin is still being researched. Yet, as the MSA argues, the more bodies in 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,[113] MSA introduces noise. They multiply according to anonymity, or better, impersonhood. We are not disappearing, but only multiplying our impersonhood, our s/he/it, rendering the very sense of identity meaningless (Figure 20).

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 dialectic that makes one 'stand opposed to the order of things, but simultaneously avoids the risk involved with

Figure 20 The Microbiome Security Agency, AOM (Automated Obscuration Machines), 2015. Copyrights Emma Dorothy Conley.

trying to overturn that order',[114] as Ranciére describes it. Rather, MSA's notion of resistance is generated from within the system. When MSA performs an obscuration for the sake of protecting difference, it practices the messiness and noisiness of multibodies' politics:

> We wanted to design something that empowered individual's to help themselves and to help each other. We wanted to find a clever solution that loudly outsmarted an unfavourable system, rather than encouraging others to silently hide in the shadows of that system. The Community Bacteria Bank was designed to do this. It houses the diverse bacteria samples donated by the public, but it also includes satellite-objects, called AOMs, that function like ATMs. These AOMs are designed to be temporary receptacles on the street. Citizens can donate a small bacteria-rich sample at an AOM, but they can also receive a dose of the 'Obscuration Solution' in the form of a mist, powder or gel. When applied to the skin, this 'Obscuration Solution' adds a layer of DNA (not bacteria, just DNA) that obscures the bacteria on the user's skin. The idea is that if we all donate samples to the mix, it becomes very diverse and adds a lot of noise to the Obscuration Solutions.[115]

In this way, MSA creates ways of practicing microbiopolitics for multibodies. Without dialectical negation and within the contamination of multiple relations, they create spaces of tension. How to live and care for the multiple

self in that tension? Rather than protecting borders, fixed identities and their autonomies that foster new and more invasive forms of surveillance and management, MSA proposed caring for the borders' irrelevance – multibody can only thrive as anonymous impersonal many, as s/he/it and as waste and as multibody. The need is to find thus ways of contamination as multiple that can still thrive.

Agonistic microbiopolitics

In order to exercise the lack of given boundaries, in order to not only resist the logic of negation but also 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 them redundant by contamination. 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 as contamination 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.[116] 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 economic commodification. Nevertheless, such acceleration that turns bodies into anonymous beings is already implemented by the advanced capitalism of surveillance where clients or users function rather as a resource of data mining.[117] The challenge is how to condition the practicing multibodies so that it will not be subsumed into given function, identity and commodity. Acceleration, it seems, would need thus be not of speed but of slowness, allowing the difference to be sustained.

The multispecies alliances that generate 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 – of relations of contaminations – the artists contaminate what bodies can do, modulating and transforming the very ideas and categories we might use to describe them. At the same time, 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 material practices, we can 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 risky and its conditioning bares a characteristic of what Chantal Mouffe described as agonistic spaces. Mouffe argues that 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. The existence of multibody depends on continuous encounters. 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. Importantly, like the open sense of immunity, agonism should not be understood in dialectical way, as the practices directed towards overcoming that which is opposite. Rather, conditioning multibody means maintaining the state of tension without pursuing its resolution. Each overcoming of tension is, as Mouffe argues, 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 affect as contamination.

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.[118] Art can, of course, fall into a capitalist machine, the possible effects of which we have seen in the previous section when discussing the commodification of multibodies of the microbiome. For Mouffe, a total resistance to capitalism is in art's initiations of encounters, or what she calls agonistics spaces and what I call affect as contamination. 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.'[119] 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 fixed identity. It is thus a risky exercise as you never know what a particular multiplicity might entail.

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.'[120] 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 seems to want to embed the dynamic and risky relationality that passions embody into the 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,[121] she calls for maintaining the very sense of encounter that would be driven by the sense of significance and urgency that passion foster: 'In a democratic polity, conflicts and confrontations, far from being signs of imperfection, are the guarantee that democracy is alive and inhabited by pluralism.'[122]

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 thus already within a defined what is art space. Can we think and practice the microbiopolitics of our multibodies outside art? Is art the only space where agonistic encounters are still possible without harming bodies, and with care for their thriving?

What the contaminants of *Layer Cake*, of Adriana Knouf 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 as contamination 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 three contaminants share and what is crucial in our analysis is their ways of practicing embodiment within affect as contamination – through speculation, fabulation and the creation of spaces of tension driven by the logic of immunity – immunity not of one, but mutating multiple.

Speculation is not a futurism of the impossible, but rather a multiplication, conditioning 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 but condition its flourishment through caring for the relations of contamination. Such a speculative approach calls for an ethical stand – for infectious ethics – for the ethics of contamination.

5

Contaminant V like a Vastal[1]

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 an easy-going lecture, just listen and enjoy,' I recall thinking. Only those readers who have met Zaretsky 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 and 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 messy and noisy – everything you would not expect from an academic lecture. I discovered a similar logic, driven by the risk of encounter, in 2013, in the exhibition 'Yes Naturally' in The Hague, the Netherlands, where Zaretsky presented his work *Errorarium* (Figure 21).

The work *Errorarium* was a part of the research 'BioSolar Cells' in the Netherlands[2] – a programme that focuses on establishing a sustainable source of energy by extracting chlorophyll[3] from organisms, such as plants, algae and some bacteria, which are capable of photosynthesis (the process of converting solar energy into chemical energy[4]) 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

Figure 21 Adam Zaretsky, *Errorarium*, 2012. The 'Bipolar Flowers' are growing in the Errorarium. The artist describes the plants as 'Bipolar (manic-depressive), Double Dipped, Zinc Fingered (ZF), GMO Arabidopsis thaliana plants.' Copyright Adam Zaretsky.

mutants'.[5] 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 visitor could change light and sound, altering the environment of the growing organism inside the machine. 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.[6]

From Latin, the word 'error' denotes 'the action of roaming or wandering; hence a devious or winding course, a roving, winding'.[7] As a deviation from accuracy,

it also means a mistake, transgression, trespass, fault and wrong-doing.[8] The explicitness of Zaretsky's use 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'.[9] 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 1980s and 1990s. 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. (Figure 22) He asks: 'Do you think you are enriching or stressing the organism in the *Errorarium* with your mediated entertainment? Why do you believe this?'[10]

However, the playfulness of manipulation, under the cover of sustainability and scientific innovation, raises a much more profound question. In his work,

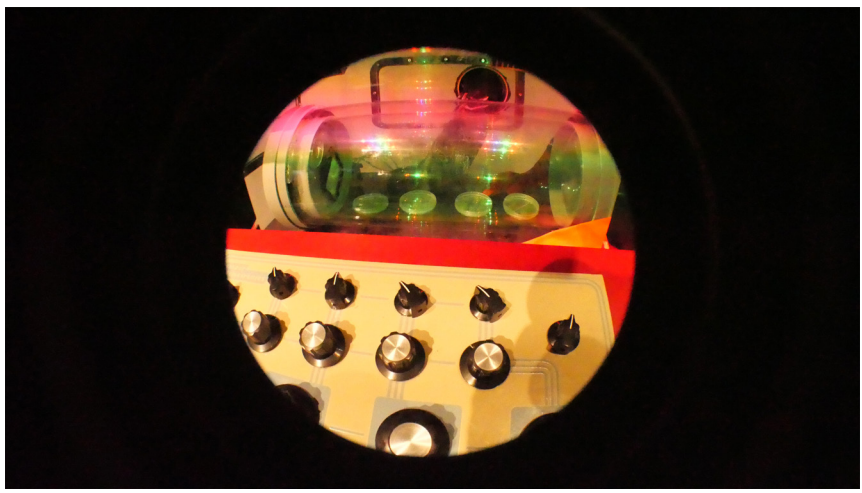

Figure 22 Adam Zaretsky, *Close Up Errorarium interface*, 2012. The plants in the Errorarium have been 'whole genome fracked' in a bipolar duet of two artificial transcription factors (activating and repressing) competing for the 524 GTA GAG GAG binding places on the Arabidopsis genome. Copyright Adam Zaretsky.

Zaretsky produces a new shape for ethics, a new understanding of how to live within the encounters of contamination. The 'BioSolar Cells'[11] 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, 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 asks: 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 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?[12]

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 the ethics of contaminations, ways of being with the future present mutants.

The ethics of contamination

How to care for risky contamination? In the face of the risk of harm, violence and death, it becomes cruel to demand lingering for the sake of seeing what happens, for the sake of experimentation itself. How to practice and care for the practice of contamination? Within art's practice the answer to that question seems simple. In the case of Zaretsky's works and performances that are embedded

within the reciprocal entanglement of aesthetics, ontology and ethics, to care is to experiment with implications. In his practice, he seems to enact Guattari's 'new aesthetic paradigm' that actualizes 'ethico-political implications'.[13] As Guattari writes, 'to speak of creation is to speak of responsibility of the creative instance with regards to the thing created'.[14] 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',[15] 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. Matters of affect respond to Haraway's plea for 'staying with the trouble',[16] they 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, we 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 contamination 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. Affect as contamination 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 relational and material understandings of bodies are. None of the implications of contaminating matters

of affect are stable and intrinsic. The logic of contamination that affect implies is driven by tension and transformation. However, when this logic is applied to traditional categorization and systematization in order to universalize, fix and accelerate them, affect may become frozen into affection, constituting a powerful tool for the logic of signification that drive control and commodification. In the previous chapters, I discussed how 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.[17] Hence, affect as contamination becomes an expression of bodies. It can create bodies and multiply their relations, but, because of its transformative character, it can also serve as a tool of management, control and destruction through fixation and universalization. Practising bodies within affect as contamination demands thus not only an application of relations that condition and emerge from tension but also a relational practice of thinking as a result of the material notion of meaning that directly influences these practices. In other words, affect as a condition of thinking practice and practising 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 from each other. Affect as a condition of relational thinking and practice thus demands a rethinking of the ethics that is equally dynamic, relational and processual as our bodies are. Such ethics will have to respond to the agonistic spaces within which bodies are shaped, and to relations of tensions that affect implies. Finally, ethics will have to parallel the microbiopolitics of the multibodies that we are that is about caring for the impersonal in their thrive despite ongoing risks. Reminiscent of Haraway's infectious ethics, I call this the ethics of contamination.

Ethics based on sustaining tension means creating agonistic contaminating spaces not only without the necessity for consensus but also without the trauma of encounter as an abuse of power characteristic to the logic of post-pasteurian economies of innovations through commodification, for instance. 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. It is grounded in Haraway's famous call for practising 'response-ability'. This response-ability within affect, 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.[18]

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 are thus to create spaces where the implications of these capacities may be encountered. 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. This is why Melinda Cooper blames the merging of the vitalist philosophy with the theories of complex dynamic system for the commodification of life and living bodies that turn life into 'the self-organizing economy with the necessity for continual crisis'[19]. When the phenomenon of living systems based on growth and re-growth is adopted by the capitalist desire for acceleration, it leads to the new bioeconomy, where life and living bodies are both devaluated and commodified, but also each death is justified by the believed inevitable re-growth.[20] Creation that transforms rather than neutralizes the tensions must thus involve 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.[21]

Conditioning contamination is not neutral, also it is not a value in itself, it is not something morally good or desirable – it needs verification. Only through experimenting with what the bodies can do can we attune our actions to their implications and that demands slowness. Importantly, without the focus on implication that shapes our actions, slowness that allows for multiplication alone becomes turned into a machinic act, subsumed into the logic of accumulation for the sake of it. This responsibility that affect as contamination demands have thus a different dynamic than any moral imperative.

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 not only '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'.[22] 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.'[23] 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'.[24]

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.'[25] 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 embodied forms of agency formation – where you are immersed in the world of multiple bodies, encountering and mutating with 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 contaminate you, that can touch you, that can be felt and, as a result of the encounter you are mutually transformed – contaminated with.

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. Affect as contamination implies thus responsibility that demands bodies being implicated within the process of their transformations, it demands their attention to the consequences of their mutations. As Magdalena Zamorska following Thom van Dooren argued, we need to 'be held accountable' for situatedness of our practices of care.[26] The ethics of contamination would thus be about keeping the tension that is to stimulate contamination by resisting any *ressentiments* of identity and sameness in favour of investigating the implications of what becomes important for these relations, bodies and events to further multiply and thrive. 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?[27]

Deleuze's question: 'what way of existing does it involve?'[28] reveals the urgency of onto-epistemo-ethical entanglements within which, rather than set of rules that morality indicates, we follow ethical experimentation as mapping the implications – relations of significance. The next question that would follow would be: How to act along ethics? What would being implicated entail and how to practice such notion of responsibility as accountability beyond escape to morality and within care for bodies continuation to mutate and multiply? 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

(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 contaminations (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.'[29] For artists, the onto-epistemo-ethico-aesthetic practice of bodies seems to be already inherent in their practice. In particular, as discussed in this book, bioart's engagement with living matters imperceptibly yet profoundly practices the multiple dimensionality of an infectious ethics. Implicitly, we have already encountered the contaminating way of bioart's practice that urges a consequent conceptualization of bodies within affect as contamination. Yet, one more argument, contaminant, deserves consideration in the context of the infectious notion of ethics that must be addressed.

Contaminant G like a green glitter in their laughter

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'.[30] Yet, Willet and O'Reilly's performance provided something rather different.

Dressed in a white laboratory coat, tailored into a baroque design, Jennifer Willet entered a scene of ethical examination next to Kira O'Reilly, who was wearing a green, shimmering dress. Attached to Willet's coat were transparent bulbs, which seemed to function as Petri dishes, but also looked like nipples held by the pink flounces, containing collected samples of microbiome 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 (Figures 23 and 24). The artists performed in front of an actual ethical committee consisted of experts in ethics and biotechnology, that sat in order to judge whether their artistic pursuit could be fulfilled according to ethical norms.

Figure 23 Kira O'Reilly and Jennifer Willet, *Be-Wildering*. As part of the 'Trust Me, I'm an Artist' series, WAAG Society, Amsterdam, the Netherlands. Curated by Lucas Evers and Anna Dumitriu, 2017. Photo: Bas de Brouwer. Copy rights Kira O'Reilly and Jennifer Willet.

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 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.'[31]

To the sound of O'Reilly's dress shimmering, sequins sparkling, and sipping wine, the artists engaged in a joyful conversation about the possibility of ethically evaluating art, and about their latest plan – to gather and spread contaminations, by collecting multiple samples and travelling, dispersing green glitter into the waters and forests of Canada and Finland.[32] The audience was amused, I was amused and captured by their stories, laughter and the shimmer of the glitter – a glitter has this property, and as Rebecca Coleman pointed out, you choose it as much as it chooses you.[33] Glitter has a capacity to penetrate, to be omnipresent

Figure 24 Kira O'Reilly and Jennifer Willet, *Be-Wildering*. As part of the 'Trust Me, I'm an Artist' series, WAAG Society, Amsterdam, the Netherlands. Curated by Lucas Evers and Anna Dumitriu, 2017. Photo: Bas de Brouwer. Copy rights Kira O'Reilly and Jennifer Willet.

within its multiple use and function. Glitter damages bodies within their environment through its microplastic components and it enchants, reimagines bodies. It helps to classify bodies according to age, class and gender, it attracts, lures and beautify, and it is a tool to normalize and penalize bodies being 'associated with childish, irresponsible and feminised behaviour'.[34] Nevertheless, as Coleman argues, glitter because of its penetrating and contaminating character, gives a possibility for political and pedagogical practice of learning how to affirm the risk of transformation beyond control. It thus seems that what O'Reilly and Willet proposed was this enchantment with risk as a possibility to think otherwise, as an affirmation of mutation and transformation into multiple shimmering bodies.

Having filled the space with stories and green glitter, 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', one of the committee members argued. Later, 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 how to mitigate

the risks of contamination: 'the danger is that the purpose [of the performance] is to contaminate.'[35] No decision has been reached. Both artists and scientists left with visible annoyance of the latter.

I asked myself, what was that gift that cannot be grasped and captured? 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 sharing contamination, the possibility of transformation through thinking about implication rather than control, while the ethics committee wanted to manage the relations of change and direct its movement into a desired and stable form that would fit into the system of governance and risk control.

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 safely?

Should we trust an artist?

Bioart is recognized as already practising what I have mapped in this book as multiplications of contaminations, of conditioning the multiplication by adding new relations, new encounters and by testing them. As such, bioart already performs the ethics – rather than fixing bodies according to given norms, it not only challenges these norms but also investigates the implications of bodies' contaminations. In its care for contamination and investigation of relation of implications, bioart is far from the norms and rules of risk assessment governing bioethical committees of science departments. Does it thus mean that only in art such ethics of contamination is possible? What about bioethical standards, theories and research that carefully monitor biotechnological practices? Should not we trust the science in what is just when it comes to body manipulations, their health and well-being? According to Zylinska, what distinguished bioart's practice from the established bioethical committees is what deserves an equal attention. As she argues, bioart brings 'non-goal oriented agendas',[36] into the discussion on living bodies manipulations:

> Although the two [bioart and biotechnology] are often developed from within the same labs and are part of the same research grants, 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.[37]

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, with its risky contaminations. 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'.[38] However, the question remains, what does such a non-goal-oriented agenda mean? What might such responsibility-for be like when it does not refer to any given moralistic norms or pragmatic goals? 'Responsibility for' would suggest, as we have discussed, the presupposition of the relation of power and duty towards a less potent other. Zylinska indicates thus the necessity of human assessment, 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.[39]

In this necessity of human assessments of relations between bodies, Zylinska actualizes affect within the judgement of good and bad relationality. However, the ethics of contamination practised 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 practising and practice thinking as *responsibility before* – as the spaces of tension. The ethics of contamination that I propose here is not directed at creating a system of methods 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 to proliferate. In other words, it is about responsibility before the multibodies' relations that might become significant for these bodies and are not yet recognized as such. In this way, rather than non-goal oriented, it is highly pragmatic understanding of ethics. Ethics of contamination is not an open-ended proliferation of relations, but a careful investigation and experimentation of the implications of contaminations, of what for a body as a multibody in contaminations becomes significant.

The underlying presupposition of this book is that my multiple encounters and processes of thinking with bodies within affect as contamination 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 practising bodies. 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 and assessment 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 as a way not only out of the given logic and defined rules but also a way out of numbness that living within contamination might cause. This is how bioartists have been practising embodiment, changing radically the understanding of what it means to be a body and care for the relationality that is already affecting and affected by. The question of ethics transforms itself into a plea for the necessity for caring for thinking otherwise, that the thought to affect and be affected 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.

In search of resistance

It is quite risky to end a book, 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 bodies within affect as contamination. Isabelle Stengers has already formulated such an experimental approach to thinking otherwise by implementing Virginia Woolf's plea for 'Think we must'[40] as a form of resistance in the Deleuzian notion of an 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'.[41] For Stengers, such methods of experimentation for mobilization 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"'.[42]

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. It can have many modes. Deleuze distinguishes two kinds of idiots. The first one is Cartesian, 'who is the private thinker, in contrast to the public teacher'.[43] 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'.[44] The other kind of idiot, Deleuze finds in Dostoyevsky, is the one who is still 'a private thinker, but with a different singularity'.[45] 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.'[46] Significantly, these 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?'[47]

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, a linear evolution from one to the other, but rather how to mutate, contaminate the existing ones simultaneously. They emphasize the change of focus from what is into what is important. The acknowledgement that there is something much more important becomes a critical condition of thought. Importantly, 'critical' here is not understood in a deconstructive 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 as contamination 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 from Herman Melville's novel *Bartleby The Scrivener*, which Deleuze ascribes with the literal sense of the formula 'I would prefer not to'.[48] Resistance of an idiot is not directed at its own nihilation, does not end with death, as is the case in Melville's novella. An idiot of the ethics of contamination

is a mutation not only of 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'.[49] 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 contaminates, but in this contamination it destroys, annihilates, it does not generate new logic of new processes, unless we consider the nonsense of the others reacting to his detachment. If Bartleby generates affects, they would be sad ones, ones that stop further relations, ones that destroy bodies. Bartleby's idiot is a withdrawal from the joyful affects, from relations of thriving contaminations, 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 contaminations. An idiot resists the status quo by sensing and desiring to think otherwise, to create contaminations. She takes a flight and continues the ritual of experimentation: mutating, in this way, even the significance of her resistance.

Encountering the witches flight

In her text, where she reveals how she found herself becoming already a pine tree, Špela Petrič writes:

> This is not the dead-end it appears to be. Rather than submitting to a silent practice, I resolved to drown the erroneous flatness of any single plant representation in an assemblage of grapevine stories, and to pursue deconstructions and recombinations of ethico-onto-epistemological tools that strip them of their mesmerising and unquestioned power. So that from the crack between fact and fiction something other might grow.[50]

Being also an artist and a researcher and a biophilosopher and a biohacker and a story-teller and a scientist, she taught me how to practice the mutating ethics of

contaminations. Her continuous travel and nomadic existence mean she is based somewhere between her home city of Ljubljana and Amsterdam. I remember my first encounter with her work *Naval Gazing* in 2014 – a winning project within *Bioart and Design Award* in the edition of 'Matter of Life'.[51] *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 how her practice is marking what the contaminating matters of affect may involve.

A performance that 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 25). It was part of the project 'Trust me, I'm an Artist' – the same platform that hosted Willet and O'Reilly's performance

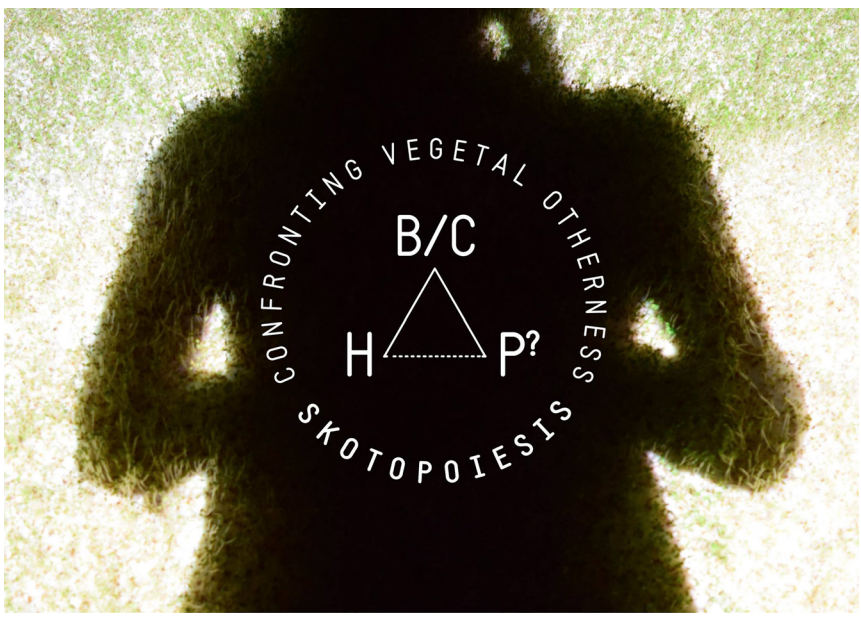

Figure 25 Špela Petrič, *Confronting Vegetal Otherness: Skotopoiesis* – semiotic triangle, 2015. Courtesy of the artist.

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',[52] or, as I would call it, a ritual for the ethics of contamination.

The design of the encounter was relatively 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 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 26, 27, 28 and 29).

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

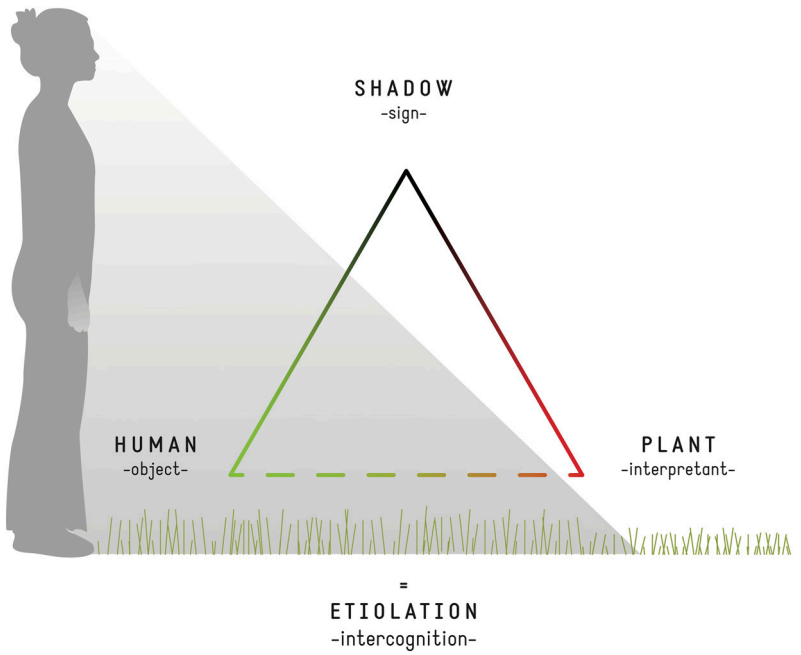

Figure 26 Špela Petrič, *Confronting Vegetal Otherness: Skotopoiesis* – shema, 2015. Courtesy of the artist.

Figure 27 Špela Petrič, *Confronting Vegetal Otherness: Skotopoiesis* – performance in Kapelica Gallery, Ljubljana, 2015. Photo by Miha Fras, courtesy of Kapelica Gallery.

Figure 28 Špela Petrič, *Confronting Vegetal Otherness: Skotopoiesis* – cress close-up, 2015. Courtesy of the artist.

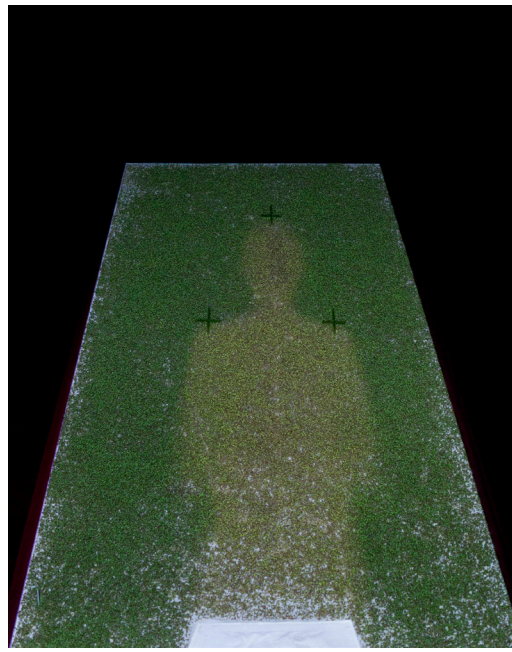

Figure 29 Špela Petrič, *Confronting Vegetal Otherness: Skotopoiesis* – cress after the twenty-hour performance in Kapelica Gallery, Ljubljana, 2015. Photo by Miha Fras, courtesy of Kapelica Gallery.

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 biosemiotical 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 conditioning the contamination of relations of affect but also affect happening.

The choice of Petrič to experiment with plants when investigating the contamination and its risky relationality was not coincidental. 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 functions 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. 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 we can now call contaminating. 'Some things are just unlike us',[53] 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 human, who, through her kinetic immobility, creates a condition of disruptive communication.

The Anthropos, but that which 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 not only 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'.[54] In her performance, Petrič enacted the persona of an idiot, who slows down and resists in order for something different to occur. The necessity to think outside the anthropocentric significations is blurred and contaminated by the acknowledgement of the inevitably asymmetrical relations and anthropocentric privilege she, as a human, embodies. As Natania Meeker and Antónia Szabari argue, plants have this double character of being a 'privileged bodies . . . within the decentralised mechanism of capitalism'.[55] Plants have been at the centre of colonial expansion and biopiracy, fostering desires for resources and their commodification. At the same time, however, they escape the total capture of the taxonomic universalization. As neither one nor many, as pot plants grown in green houses, and massed produced, they emerge as 'biopolitical subjects'[56] being witnesses before the human. In her performance, Petrič thus rather than disavowing from implications of these double character of the plant embraces it as its own. She becomes implicated in plants and her double becomings, their ambiguous and elusive embodiment of contaminating relationality.[57]

Through the tension of this uneven relationality of bodies in the encounter, Petrič performance captures imperceptible biosemiotic movements. This is an experimental approach to thought as practice, the biosemiotical urgency of creating material relations that would foster new because of care-ful processes of thinking contaminations. 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 and 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 that relaying on theory, I will just see how this process transforms me and my thoughts towards this.[58]

This collective understanding of Petrič practising 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.'[59]

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 and ways of thinking otherwise are neither given nor neutral. They demand practice of habits, changing and re-shifting those very habits so that they respond to the matters of what becomes significant. Thus, when practising affect as contamination, when practising contaminating ethics, we may follow Deleuze and Guattari's insistence that 'to think is always to follow the witch's flight'.[60] We should not take their words here as a metaphor, but as 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.[61]

Contaminating matters of affect become the contemporary witchcrafts of which bioartists are the witches who establish new ways of practising bodies and their multiple relationalities. Bodies of biotechnology demand these witches take flight, resist universal capture, create ways to repeat this resistance and sustain 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 within affect, leaking, porous, multiple and contaminating demand practices of resistance and its continuation through mapping implications and care. We can learn from these artists, by slowing down, by searching not only new concepts but also their implications that grow, sometimes, between the cracks. We can change the logic of thinking about bodies into relational but also contaminating, 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 dualistic 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',[62] which has never been more literal than now, when encountering the very mutants of multibodies that we already are. Indeed, we either mutate or die, but since there is no choice of the latter, at least for most of us, what is at stake is to have a choice of how to live and die and how to practice and care for our multiple bodies.

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"'.[63] 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. Through learning and continuing the relations of contamination, 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. Contaminations are precarious and risky. Contaminations 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 care, and to fight, and to flight, and to feel, and to cry, and to sing, and to die, and to claim, and to give up, and to shimmer, and to dance, and to be touched, and to relate, and to experiment, and to disagree, and to eat, and to be eaten, and to shit, 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 go back, and to grow, and to act, and to listen, and to resist, and to shit, and to live, and to die, and to laugh, and . . .

Notes

Chapter 1

1 Agnieszka Anna Wołodźko, 'Living Within Affect as Contamination: Breathing in Between Numbers', *Capacious: Journal for Emerging Affect Inquiry* 2, no. 1–2 (2019–2020): 221.

2 As it is explained by the Wyss Institute, a biological engineering research institute based at Harvard University, these are 'microfluidic culture devices that recapitulate the microarchitecture and functions of living human organs, including the lung, intestine, kidney, skin, bone marrow and blood-brain barrier, among others. These microdevices [. . .] offer a potential alternative to traditional animal testing. Each Organ Chip is composed of a clear flexible polymer about the size of a computer memory stick that contains hollow microfluidic channels lined by living human organ-specific cells interfaced with a human endothelial cell-lined artificial vasculature, and mechanical forces can be applied to mimic the physical microenvironment of living organs, including breathing motions in lung and peristalsis-like deformations in the intestine. They are essentially living, three-dimensional cross-sections of major functional units of whole living organs. Because they are translucent, they provide a window into the inner workings of human cells in living tissues within an organ – relevant context;' see 'Human Organs on Chips', Wyss Institute, 5 August 2017, available online: https://wyss.harvard.edu/technology/human-organs-on-chips/ (accessed 10 June 2019); Diana Kwon, 'Organs on Chips', *The Scientist Magazine*, 28 August 2017, available online: https://www.the-scientist.com/news-opinion/organs-on-chips-31020 (accessed 10 June 2019).

3 Paul B. Preciado, *Testo Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*, trans. Bruce Benderson, English-Language Edition edn (New York: The Feminist Press at CUNY, 2013), 35.

4 Isabell Lorey calls *precarisiert* the state of precarization of bodies by making the precarity a tool for sustaining the insecurity in the name of governance and control. Precarization is thus a technology of governance of that what is already ontologically precarious. See Isabell Lorey, *State of Insecurity: Government of the Precarious* (London, New York: Verso, 2015).

5 Melissa Gregg and Gregory J. Seigworth, eds, *The Affect Theory Reader* (Durham, NC: Duke University Press Books, 2010).

6 Ibid., 5.

7 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.

8 Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham, NC: Duke University Press Books, 2002).

9 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (London: Continuum, 2004), 75–78.

10 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*, ed. Rick Dolphijn and Rosi Braidotti (Leiden: Brill, 2015), 171–3.

11 Stephen Zepke, *Art as Abstract Machine: Ontology and Aesthetics in Deleuze and Guattari* (New York: Routledge, 2011), 121.

12 Clare Hemmings, 'Invoking Affect: Cultural Theory and the Ontological Turn', *Cultural Studies* 19, no. 5 (2005): 562–3.

13 Ibid., 563.

14 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 mutability of matter' in philosophical and cultural analysis, it is said to significantly contradict science. See Constantina Papoulias and Felicity Callard, 'Biology's Gift: Interrogating the Turn to Affect', *Body & Society* 16, no. 1 (2010): 31, 39. In turn, Ruth Leys criticizes the presumed non-signification of affect due to its non-identifiable character. She draws consequences from characterization of affect as the automatic response that happens before consciousness as well as a sense of intentionality. 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-essentalism 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. See Ruth Leys, 'The Turn to Affect: A Critique', *Critical Inquiry* 37, no. 3 (1 March 2011): 450–1.

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

16 I thank Jadwiga Kamola for pointing out to me the importance of Ludwik Fleck for the collective production of facts.

17 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 which can be read along the notion of contamination as a way of scientific knowledge production; 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, Norwell, MA: Springer, 1986); Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* (New York: Vintage, 1994).

18 'Contamination, n.', in *OED Online* (Oxford University Press, n.d.), available online: http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/40057 (accessed 17 November 2019).

19 Latour, *Pandora's Hope*, 18.

20 Ibid.

21 Alexis Shotwell, *Against Purity: Living Ethically in Compromised Times* (Minneapolis, MN: University of Minnesota Press, 2016), 10.

22 Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1993).

23 Shotwell, *Against Purity*, 13.
24 Ibid., 15.
25 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.
26 Ibid., 33.
27 Ibid., 37.
28 Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press Books, 2016).
29 Isabelle Stengers, *Another Science Is Possible: A Manifesto for Slow Science*, trans. Stephen Muecke (Cambridge,, MA: Polity, 2018), 81–2.
30 See Eduardo Kac, Marion Laval-Jeantet, Benoît Mangin, Marta de Menezes, George Gessert and Paul Vanouse, 'What Bio Art Is: A Manifesto', 2017, available online: http://www.ekac.org/manifesto_whatbioartis.html (accessed 10 June 2019). In this manifesto, a group of leading bioartists makes a division between what can be considered as bioart and what cannot. As they write, works that use solely non-living materials such as 'acrylics, paper, pixels, plastic, steel, or any other kind of nonliving matter', cannot be taken as bioart.
31 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.
32 Ibid.
33 Gilles Deleuze and Félix Guattari, *What Is Philosophy?* (London etc: Verso, 1994), 198–9.
34 Ibid., 164.
35 Ibid., 163.
36 For comprehensive historical and contemporary documentation and analysis of art's relation with science and living matters, see Ingeborg Reichle, *Art in the Age of Technoscience: Genetic Engineering, Robotics, and Artificial Life in Contemporary Art*, preface Robert Zwijnenberg, trans. Gloria Custance, 1st edn (Vienna, New York: Springer Vienna Architecture, 2009); George Gessert, *Green Light: Toward an Art of Evolution*, 1st edn (Cambridge, MA: The MIT Press, 2010).
37 Gilles Deleuze, *Cinema 1: The Movement-Image* (Minneapolis, MN: University of Minnesota Press, 1986); Gilles Deleuze, *Cinema 2: The Time-Image* (Minneapolis, MN: University of Minnesota Press, 1989).
38 Gilles Deleuze, *Proust and Signs* (London: Continuum, 2008).
39 Gilles Deleuze, *Francis Bacon: The Logic of Sensation* (London: Continuum, 2003).

40 Deleuze and Guattari, *A Thousand Plateaus*, 329–41.
41 Reichle, *Art in the Age of Technoscience*, 1.
42 Mitchell, *Bioart and the Vitality of Media*, 77.
43 Marietta Radomska, 'Promises of Non'/Living Monsters and Uncontainable Life', *Somatechnics* 8, no. 2 (2018): 215. See also Marietta Radomska, 'Uncontainable Life: A Biophilosophy of Bioart' (PhD diss., Linköping: Linköping University Electronic Press, 2016).
44 See Jens Hauser, 'Bio Art – Taxonomy of an Etymological Monster', *Hybrid: Living in Paradox, Ars Electronia*, 2005, available online: http://90.146.8.18/en/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=13286 (accessed 4 September 2013).
45 Monika Bakke, 'Zoe-philic Desires: Wet Media Art and Beyond', *Parallax* 14, no. 3 (2008): 21.
46 Deleuze and Guattari, *What Is Philosophy?*, 126.
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Chapter 2

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Chapter 3

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38 Donna J. Haraway, *When Species Meet* (Minneapolis, MN: University of Minnesota Press, 2007); Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press Books, 2007).
39 'Test_Lab: Art Meat Flesh.'
40 Howells, *Experimental Eating*, 12.
41 Ibid.
42 Ibid., 18.
43 See Marcello Barbieri, 'What Is Biosemiotics?', *Biosemiotics* 1, no. 1 (13 February 2008): 1–3.

44 Hilary Rose and Steven Rose, *Genes, Cells, and Brains: The Promethean Promises of the New Biology* (London, New York: Verso, 2014), 25.
45 See Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: PublicAffairs, 2019). Although Zuboff's analysis concerns the digital commodification of human experience, its mechanism can be seen as parallel to those in biotech industry.
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47 Thomas Sebeok, *Signs: An Introduction to Semiotics*, 2nd edn (Toronto, Buffalo, NY: University of Toronto Press, Scholarly Publishing Division, 2001), 92.
48 Ibid., 283.
49 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.
50 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. and foreword by Brian Massumi (London: Continuum, 2004), 283.
51 Uexküll, *A Foray into the Worlds of Animals and Humans*, 139.
52 Brett Buchanan, *Onto-Ethologies: The Animal Environments of Uexknll, Heidegger, Merleau-Ponty, and Deleuze* (Albany, NY: State University of New York Press, 2009), 4.
53 Ibid., 32.
54 Uexküll, *A Foray into the Worlds of Animals and Humans*, 145.
55 Ibid.
56 Ibid., 201.
57 Ibid., 80.
58 Ibid., 201.
59 Charles Morris, *Signification and Significance: A Study of the Relations of Signs and Values*, 3rd edn (Cambridge, MA: MIT Press, 1968), vii. 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', available online: https://vimeo.com/107274730 (accessed 7 April 2016).
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61 Gilles Deleuze, *Proust and Signs* (London: Continuum, 2008), 83–4.
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68 'European Environment Agency's Home Page – European Environment Agency', Folder, 2017, available online: https://www.eea.europa.eu (accessed 3 June 2017).
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70 Ibid., 135.
71 Ibid., 120.
72 The Center for Genomic Gastronomy, *Eat Less, Live More & Pray for Beans*.
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80 Deleuze, *Proust and Signs*, 60.
81 Gilles Deleuze and Félix Guattari, *What Is Philosophy?* (London: Verso, 1994), 82–3.
82 Gilles Deleuze, *The Logic of Sense* (London, New York: Continuum, 2004), 304.
83 Gilles Deleuze, *Difference and Repetition*, trans. Paul Patton (New York: Columbia University Press, 1995), 119.
84 Deleuze, *Proust and Signs*, 61.
85 Deleuze, *Difference and Repetition*, 119.
86 Ibid., 118.
87 Ibid., 145.
88 '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.
89 Deleuze, *Proust and Signs*, 11.

90 See the growing meat company *Mosa Meat* that is a start-up based in Maastricht, the Netherlands, whose chief scientific officer is Mark Post, professor of vascular physiology at Maastrich University: *Mosa Meat*, available online: https://www.mosameat.com (accessed 23 October 2019). The company structured around Mark Post, who is self-proclaimed 'father of culture meat' since 2013. The news about the meat in the lab production came to light without acknowledgement of bioartists, such as Ionat Zurr and Oron Catts who have created 'The Semi-Living Steak' and consumed the first meat grown from the frogs muscle 'Disembodies Cuisine' already between the 2000 and 2003.
91 The Center for Genomic Gastronomy, 'Community Meat Lab Amsterdam', Vimeo, available online: https://vimeo.com/50204650 (accessed 6 April 2016).
92 Patricia MacCormack, *The Ahuman Manifesto: Activism for the End of the Anthropocene* (London, New York: Bloomsbury, 2020).
93 Ibid., 163.
94 Annemarie Mol, *Eating in Theory* (Durham, NC, London: Duke University Press, 2021), 30.
95 Dolphijn, *Foodscapes*, 13.
96 Ibid., 15.
97 Ibid., 17.
98 Aliens in Green, *Welcome*, [video] available online: https://vimeo.com/236154578 (accessed 25 October 2020).
99 Paul B. Preciado, *Testo Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*, trans. Bruce Benderson, English-Language Edition (New York: The Feminist Press at CUNY, 2013), 33.
100 Ibid., 33–4.
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104 Michele A. La Merrill et al., 'Consensus on the Key Characteristics of Endocrine-Disrupting Chemicals as a Basis for Hazard Identification', *Nature Reviews. Endocrinology* 16, no. 1 (2020): 45, https://doi.org/10.1038/s41574-019-0273-8.
105 Malin Ah-King and Eva Hayward, 'Toxic Sexes Perverting Pollution and Queering Hormone Disruption', *O-Zone: A Journal of Object-Oriented Studies*, Issue 1: Object/Ecology (Autumn 2013): 8.

Chapter 4

1 Quote from the movie *Layer Cake* (in Polish Przekładaniec) (1968), directed by Andrzej Wajda, screenplay by Stanisław Lem, Poland: Zespół Filmowy Kamera.

All quotes from the movie are translated from Polish by A. A. Wołodźko from the novel that served as a scripted for the movie: Stanisław Lem, *Przekładaniec* (Warszawa: Agora, e-book, 2012).

2 In Polish, the pronoun for a noun 'person' has a female form.

3 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (London [etc.]: Continuum, 2004), 275.

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

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

6 Deleuze and Guattari, *A Thousand Plateaus*, 2004, 9.

7 Deleuze and Parnet, *Dialogues*, viii.

8 See Claire Colebrook's analysis of irony within the history of philosophy, where when analysing the notion of irony in Deleuze and Guattari's philosophy, she argues that they prioritize humour over irony, since the latter does not induce change and only helps to enforce the belief in what is true and fix: Claire Colebrook, *Irony*, 1st edn (London, New York: Routledge, 2005), 129–49.

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

10 Ibid.

11 Gilles Deleuze, *Foucault*, trans. Sean Hand, 1st edn (Minneapolis, MN: University of Minnesota Press, 1988), 23.

12 'Mutilation, N.', in *OED Online* (Oxford University Press), available online: http://www.oed.com.ezproxy.leidenuniv.nl:2048/view/Entry/124329 (accessed 31 May 2016).

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

14 Ibid., 299.

15 Ibid., 182.

16 '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.

17 Deleuze, *Difference and Repetition*, 185.

18 Ibid., xix.

19 Ibid., xv.

20 Ibid., 222 (original emphasis).

21 Eric Blondel, *Nietzsche: The Body and Culture: Philosophy as a Philological Genealogy*, 1st edn (Stanford, CA: Stanford University Press, 1991), 211.

22 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*, 1st edn (Cambridge, Malden, MA: Polity, 2011); Roberto Esposito, *The Third Person*, 1st edn (Cambridge: Polity, 2012); John Protevi, *Political Affect: Connecting the Social and the Somatic* (Minneapolis, MN: University of Minnesota Press, 2009).

23 Esposito, *The Third Person*, 2–3.

24 Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*, trans. Daniel Heller-Roazen (Stanford, CA: Stanford University Press, 1998), 1.

25 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*, ed. Ann-Cathrin Drews and Katharina D. Martin, Edition Moderne Postmoderne (Publisher, Transcript Verlag, 2017), 221–36; in my article, I develop this differentiation between *zoë* and *bios* in the context of bioart's practice and Braidotti's understanding of bio-egalitarian thinking.

26 Esposito, *The Third Person*, 9.

27 Ibid., 11.

28 Braidotti, *The Posthuman* (Cambridge: Polity, 2013), 120.

29 Ibid., 39.

30 Agamben, *Homo Sacer*, 4.

31 See Braidotti writing on Agamben's radical opposition between *zoë* and *bios* in Rosi Braidotti, *Transpositions: On Nomadic Ethics* (Cambridge: Polity, 2006), 39.

32 Braidotti, *The Posthuman*, 60.

33 Ellen Wright Clayton et al., 'The Law of Genetic Privacy: Applications, Implications, and Limitations', *Journal of Law and the Biosciences* 6 (2019): 2.

34 Louiza Kalokairinou et al., 'Legislation of Direct-to-Consumer Genetic Testing in Europe: A Fragmented Regulatory Landscape', *Journal of Community Genetics* 9, no. 2 (1 April 2018): 118, https://doi.org/10.1007/s12687-017-0344-2.

35 Gordon Hull, 'Successful Failure: What Foucault Can Teach Us about Privacy Self-Management in a World of Facebook and Big Data', *Ethics and Information Technology* 17, no. 2 (1 June 2015): 90, https://doi.org/10.1007/s10676-015-9363-z.

36 Esposito, *The Third Person*, 92.

37 Deleuze and Guattari, *A Thousand Plateaus*, 285.

38 Ibid., 24.

39 Rosi Braidotti, *Nomadic Subjects* (New York: Columbia University Press, 1994), 4.

40 Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press Books, 2007), 140.

41 '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'.

42 Barad, *Meeting the Universe Halfway*, 141.

43 Esposito, *The Third Person*, 14.

44 Ibid., 16.

45 Ibid., 131.

46 Protevi, *Political Affect*, 49.

47 Ibid., 51.

48 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'.

49 Paul B. Preciado and Jack Halberstam, *Countersexual Manifesto*, trans. Kevin Gerry Dunn (New York: Columbia University Press, 2018), 13.

50 Braidotti, *Transpositions,* 37.

51 I thank Adriana Knouf for generously providing me with the transcript of this performance from which all quotations are generated. The transcript with the performance highlights 'Xenological Entanglements. 001a:Trying Plastic Variations (2020)' can be now accessed online at: https://biofriction.org/biofriction/adriana-knouf-aliens-ontopoietic-self-experimentation-molecular-matrix-voice/ and

https://tranxxenolab.net/projects/trying_plastic_variations/ (accessed 13 April 2022).

52 Michel Serres and James Nielson, *Genesis*, trans. Genevieve James (Ann Arbor, MI: The University of Michigan Press, 1997), 31.

53 Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham, NC: Duke University Press Books, 2012), 60.

54 Ibid., 68.

55 Ibid., 69–70.

56 Eliza Steinbock, *Shimmering Images: Trans Cinema, Embodiment, and the Aesthetics of Change* (Durham, NC: Duke University Press Books, 2019), 6.

57 Ibid., 9.

58 Ibid., 10.

59 Ibid., 12.

60 Ibid., 61–5.

61 Paul B. Preciado, *Testo Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*, trans. Bruce Benderson, English-Language Edition (New York: The Feminist Press at CUNY, 2013), 119.

62 Preciado and Halberstam, *Countersexual Manifesto*, 37.

63 'Nederlands Eerste Feces-Transplantatiebank Geopend in Het LUMC | LUMC' [First Netherland's Faecal Transplantation Bank opened in the LUMC – Leiden University Medical Center], available online: https://www.lumc.nl/over-het-lumc/nieuws/2016/februari/Nederlands-eerste-feces-transplantatiebank-geopend-in-het-LUMC/ (accessed 18 June 2016).

64 Tina Amirtha, 'Banking on Stool despite an Uncertain Future', *Science* 352, no. 6291 (9 June 2016): 1261, doi.org/10.1126/science.352.6291.1261.

65 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.

66 Ibid.

67 If you lived in the United States in 2016, provided that you were a body considered as 'healthy', 'not obese and under 50', your faeces could have been worth 40 dollars per sample. See Amirtha, 'Banking on Stool despite an Uncertain Future', 1261–2.

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69 Vanessa Rivera Amill, 'The Human Microbiome and the Immune System: An Ever Evolving Understanding', *Journal of Clinical & Cellular Immunology* 5, no. 6 (2014): 1.

70 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.

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73 Rosamond Rhodes, Nada Gligorov and Abraham Paul Schwab, eds, *The Human Microbiome: Ethical, Legal and Social Concerns*, 1st edn (Oxford, New York: Oxford University Press, 2013).

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78 Rhodes, Gligorov and Schwab, *The Human Microbiome*, 1–2.

79 Ibid., 2.

80 Ibid., 6–8.

81 Ibid., 9.

82 CRISPR (clustered regularly interspaced short palindromic repeats) technology allows for the quick editing and modelling of the DNA of any organism in accordance with a desired aim. It is particularly appropriated for use in gene

therapy. See Heidi Ledford, 'CRISPR, the Disruptor', *Nature News* 522, no. 7554 (4 June 2015): 23, https://doi.org/10.1038/522020a.

83 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*, 5 March 2015, available online: https://www.technologyreview.com/s/535661/engineering-the-perfect-baby/ (accessed 22 June 2016).

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85 Rhodes, Gligorov and Schwab, *The Human Microbiome*, 55.

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91 James F. Meadow et al., 'Humans Differ in Their Personal Microbial Cloud', *PeerJ* 3 (2015): 17.

92 Jacques Rancière, *Dissensus: On Politics and Aesthetics*, trans. Steven Corcoran (London, New York: Bloomsbury Academic, 2010), 38.

93 Donna Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1990), 204.

94 Ibid., 204–5.

95 Ibid., 218.

96 Ibid., 225.

97 Esposito, *Immunitas*, 8.

98 Ibid.

99 Ibid., 18.

100 Ibid., 148.

101 Waag Society, '*Expanded Self* Returned to Its Maker', We make open wetlab, 6 August 2015, available online: https://waag.org/en/article/expanded-self-returned-its-maker (accessed 11 November 2019).

102 'Interview Suzanne Lee', *Next Nature Network*, 21 June 2015, https://nextnature.net/2015/06/interview-suzanne-lee.

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108 Christie Aschwanden, 'The False Promise of Herd Immunity for COVID-19', *Nature* 587, no. 7832 (21 October 2020): 26–8, available online: https://doi.org/10.1038/d41586-020-02948-4 (accessed 15 April 2022); Achille Mbembe, *Necropolitics* (Durham, NC, London: Duke University Press, 2019).

109 Ibid.

110 MSA, exhibition catalogue, *Bio Art & Design Awards*, 2015, 42.

111 MSA exhibition catalogue, 52.

112 Ibid.

113 Heather Paxson, 'Microbiopolitics', in *The Multispecies Salon*, ed. Eben Kirksey (Durham, NC: Duke University Press Books, 2014), 115–21.

114 Rancière, *Dissensus*, 177.

115 Emma Dorothy Conley, 'MSA: Microbiome Security Agency for the interview by We Make Money Not Art', *We Make Money Not Art*, 9 December 2015, available online: https://we-make-money-not-art.com/msa-the-microbiome-security-agency/ (accessed 8 April 2022).

116 '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*, 1st edn (London: Bloomsbury Academic, 2015), 275–6, See also Robin Mackay, ed., *#ACCELERATE: The Accelerationist Reader* (Falmouth: Urbanomic, 2014).

117 Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: PublicAffairs, 2019).

118 See Chantal Mouffe's lecture gave at *Staging Democracy, De Balie, Amsterdam, The Netherlands, 3 June 2016*, available online: http://www.debalie.nl/agenda/podium/staging-democracy/e_9782252/p_11766021/ (accessed 27 June 2016).

119 Chantal Mouffe, 'Artistic Activism and Agonistic Spaces', *ART&RESEARCH A Journal of Ideas, Contexts and Methods* 1, no. 2 (2007): 1.

120 Chantal Mouffe, 'Politics and Passions: The Stakes of Democracy', *Ethical Perspectives* 7, no. 2–3 (2000): 149.

121 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 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 (see Braidotti, *Nomadic Theory*, chapter 9: 'Nomadic European Citizenship'), 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 ressentiment. 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.' Mouffe, 'Politics and Passions', 148.

122 Ibid., 149.

Chapter 5

1 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' (PhD diss., Rensselaer Polytechnic Institute Troy, New York), available online: http://search.proquest.com/docview/1220674667/ (accessed 17 March 2017).

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