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Agency is molecular: moved by being moved to moving or co-constitution in intra-active knowledge production

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agency is molecular: moved by being moved to moving or
co-constitution in intra-active knowledge production

monika jaeckel

A thesis submitted in partial fulfilment of the
requirements of the University of Westminster
for the degree of Doctor of Philosophy

August 2021

“Allow an uncomfortable feeling to stay – a difference to be existent.”

Workshop notes 2017, at Goldsmiths, University of London

Abstract

This practice-based PhD aims to intertwine theoretical research and artistic practice on the basis of knowledge production by conceptually thinking through motion, with movement informing the methodological counterpart in performative research settings. I argue that movement and the concept of motion, in their immanent potential for in/determinancy, transport possibilities of transversality that have been neglected in western Modernity. Both offer the means of moving beyond the bifurcated exceptionalism of Modernity's epistemology.

The project interrogates its own positioning from within by affirming embodied ways of knowing, which are marginalised within the rationalised epistemes in European Universalisms (Wallerstein). In doing so it also takes a stand against appropriation. From a feminist position, new materialism's situatedness (Haraway) and relational objectivity (Barad) are particularly suitable tools for a shift from within. The apparatus definitions of Agential Realism gather insights through agential cuts that provide a transient exteriority-within, allowing modifying the bounds of knowing from within.

The primary chapters examine the impact of practicing through theory and coalesce into a final experiment that reverses the process. Applied to the path of thoughts, movement's induction of changes to matter initiates an essential process of creating space for delinking (Mignolo/Walsh) and unlearning (Singh). The foundation of both practice- and theory-based approaches is Barad's notion of intra-active doing-being, which provides an understanding of agential intertwinement by approaching matter through and with interferences. In experiments, electronic devices were set to receive techno-sound-reverberations as diffractive concerns (noise), that transposed mattering (meaning) from co-constitutional forms.

These 'voices', enacted in material-discursive experiments of various entangled engagements in different molecular matterings (body-mind, nature-culture, non-human-human, other-self) are typically ignored, denied, or misunderstood by the notorious bifurcation of the western metaphysical matrix (Jackson). Listening to matter's iterative performativity (Barad) disclosed uneven levels of capacity (Wilderson) within such non-interrogated generalisations as the flattening to 'we' of the Anthropocene discourse. This awareness of interferential reverberations demands a multidirectional pluriverse of capabilities, which compromises any one-world (Law) exceptionality.

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List of accompanying material

aim (agency is molecular)

Weblog | 2017 - 2021

The project has been accompanied by an online weblog under the abbreviated title *agency is molecular – aim*.

Accessible at: <https://www.aim.mindgap.org/>

The below listed projects are available via the links provided here or can be accessed via the project site of the aim-weblog: <https://www.aim.mindgap.org/projects/>.

(password for *reverberating* is as on vimeo: mushrooms)

- *signalling – at the molecular level*

Performance documentation | 2019

Performance at the HYPHEN show in March 2019 at Ambika P3, London

Film documentation, 20:23 min.

Concept: monika jaeckel

Movement participants: Giulia Iurza, Livia Massarelli, Francis Maskens, Gloria Trola, Tom Wohlfahrt, Art du Déplacement and Parkour practitioners Georgia Munroe and Louiseanne Wong

E-textiles: Gabriela Guasti Rocha

Camera: Lene Vollhardt, also received material from Yao Gogoly (Esprit Concrete)

Sound: Matthias Kispert

Accessible at: <https://vimeo.com/555315395>

- ***reverberating interferences – explorations into thingness***

Experimental film documentation | 2020/21

Film set at Studio 2 at Wayne Mc Gregor Studios, London

Experimental film, 18:37 min.

Concept: monika jaeckel

Movement participants: Giulia Iurza, Selene Travaglia, Paolo Pissarra, Pepa Ubera,
Louiseanne Wong (ADD)

Sound devices: Martin Hug

Interactive moving image: *Untitled_1* by Lilia Strojec

Choreography: Pepa Ubera

Camera: Lene Vollhardt, Lilia Strojec

Accessible at: <https://vimeo.com/557139170> (version with subtitles)

<https://vimeo.com/557324389> (version without subtitles)

Password: mushrooms (for both versions)

- ***unlearning (in) the anthropocene***

Publication (documenting remainder) | 2021

Berlin / London; TEXTS © COPYRIGHT monika jaeckel, except where otherwise noted.

Contributions: drawings: Tabea Xenia Magyar; poems: Wendy Lotterman; short texts:

Giulia Iurza, Paolo Pissarra, Selene Travaglia, Lene Vollhardt, Louiseanne Wong. film

stills: Lilia Strojec, Lene Vollhardt; other images: monika Jaeckel

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Acknowledgements

The work achieved and the knowledge exchanged and gained in this research project was never accomplished individually, but always in entanglement with others, as well as other matters. However, in the context of the doctoral research, I am to be held responsible and accountable for the content hereby presented. In this regard, one result of the research is that we are never static, never a 'final' version of ourselves, but always in doing-being with all materials and matters in and around us. Therefore, the work came together through creative exchanges in knowledge and experience with a range of excellent humans and non-humans. It included the growing of mushrooms, the appliance of technological devices, and the playing with disposable cups, each showing up within the very specificity of location and situation.

Often things lead one to another, as if incited by tiny sparks from interactions. There was the meeting at a conference, where Dr. Margherita Sprio introduced me to the idea of doing a practice-based PhD. Almost a year later, my application was accepted, and she and Dr. Michael Goddard became my supporting supervisors, whose presence and push was always greatly appreciated.

Another major source for momentum and shift was provided by the stimulating materialisms reading group led by Dr. David Chandler. Participation as a regular in these meetings helped expand my understanding and added many relevant, exciting and important books to my reading list and bibliography. There were great discussions with a wonderful mix of people who usually attended from all across London and even outside. "To be moved" meant, for me, being surrounded by these amazing fellows, as well as the students from both the CREAM and CAMRI departments, with special mention to the activities of the Hyphen collective.

There were many more tiny, electrifying sparks that incited and formed the work, by affecting both the body and the mind. I wish to acknowledge the wonderful Yellow Pavillion (now The Yellow) community meeting each Wednesday for an open evening at Wembley Park, on the initiative of Andrea Queen, who is the founder of *AQ Arts London*. These open evenings with focus on Hip Hop, and African dance, and its many exquisitely talented performers first intimidated me in terms of skill level, but they were welcoming and

introduced me to the practices of breakin' and dance floor battles. Rafik Hamdani, Param Mirpuri, and Maieuran Sathanantan, whom I all knew from there, performed with me at the early in-progress event. Later, I combined these weekly sessions with Monday evenings out with the amazing crew of *Esprite Concrete* for their Art du Déplacement sessions. Some years ago, the traceur Nicholas Bluff had introduced me to the philosophy of Parkour, Freerunning and ADD, but it was Alisa Oleva who directed my interest towards this special group co-founded by Kasturi Torchia and Yao Gogoly. Together with the inspiring coaches and athletes Georgia Munroe and Louiseanne Wong, all of them in one or the other way became involved in the project. At the Hyphen symposium, Kasturi presented her research based on the unique Esprite Concrete Method which she develops together with Yao. Special mention must also go to Yao for providing excellent footage from our first performance. Georgia and Louiseanne were both irreplaceable guiding leads in Art du déplacement tracings in the first performance event.

As my network of exchanges grew more evenings became occupied, such as adding the unique free exchange event initiated by Rambert's *The Playground* Team consisting of Simone Damberg Würtz, alongside Nancy Nerantzi and former Rambert dancer Julia Gillespie. At these freely improvised choreographic events, inspirations were mixed with tons of energy and community spirit. Giulia Iurza and Gloria Trolla, whom I met at this spirited dance community, introduced me to Tom Wohlfahrt and Livia Massarelli – all of whom became part of the first performance piece. Francis Maskens joined by a call supported by The Place, yet another unforgettable space to visit in London when interested in dance and performance. As well as the inventive talent of Paola Drera was joining for one of the conference performances.

In terms of the second performance event, I wish to first thank the generosity of performers who participated under Pandemic restrictions and security measures, as equally the Wayne McGregor Studios, who made it possible to work under these guidelines. The event was a bit harder to organise and not everybody who wanted could join. The result was smaller, but the fantastic team consisting of Paolo Pissarra, Selene Travaglia, dancer and choreographer Pepa Ubera, joined by the exuberant Giulia Iurza, who made extra time for an early photo session with Lilia Strojec, and Louiseanne Wong taking part once again, fluidly switching between the dance and jumping styles. Especially in this pandemic times, it was invaluable that we could

rehearse at Pepa Ubersa's cosy studio space near Belsize Park. Unfortunately, due to pandemic regulations and changes, the trio from *Sounds and Sweet Airs*, WeiChen Tang, Kornbongkoch Harnpinijesak and Nong Hua Lim, who were planning to participate since early 2020, could not join in the end. The project was invaluablely aided by our amazing camera person, Lene Vollhard, herself an artist and dancer, who filmed at both performances. She was joined at the second event by Lilia Strojec, who helped technically and contributed her creativity and work to the performance, by contributing her excellent interactive moving image *Untitled_1*, that also reacted to the sounds in space.

It cannot be overrated how important it is to have the technology side up and running, and we would not have managed without Hassan Matar from the University of Westminster's M-Block media department, and his endless patience to help us out with the right equipment. I must also thank all who filmed, took images or organised visual and audio material around the events. I am grateful to my colleague Cassie Lin, who switched on the GoPro at one of the conferences, and most Parkour turns, flips, and jumps would go unnoticed without Any Day, who is dedicated to capturing the expressions of this sport.

Turning towards the audible, sound became immensely important as another spark that had emerged from reading about Gabriela Guasti Rocha's sensing clothes. In this context, Evangelia Papadopoulou's positive energy for early rehearsals with the clothes in Berlin was crucial. Immense thanks go to Gabriela's generous lending of her INTUERI textiles for the first performance and several follow-up conference presentations. The experience with the INTUERI pieces furthered my interest in me for the abilities in working with electromagnetic waves, that found resonance in Alejandra Pérez Núñez's exquisite exhibition at the Gallery West. Alejandra provided the contact to the musician and electronic experimenter Martin Hug, who enabled all the sound making transmissions in the second performance. Without his immense patience, the mushrooms and cups may have had much less of a voice. Noise and voice has been on my mind for a while, but it took these here listed and a few other sparks, like the book of Marie Thompson, and the insightful comments and profound knowledge of my supervisor Michael Goddard to push it a bit further.

These tiny sparks push and pull, each one in a different way according to possibilities and circumstances, opened or closed by in – or exclusions. Therefore, one line was an important

comment by Claire Cunningham, an original and poetic performer, that being moved affects very differently when the capacity assigned is regarded as limited.

As a non-native speaker, I am missing the innate sense of a language one has grown up speaking, and therefore I am incredibly thankful for an early reading of my first chapters by the writer Wendy Lotterman and her help with transcription. The artist Fareed Armaly provided invaluable critique that pushed me to be more precise and to think beyond my own horizon.

Despite the *reverberating interferences* project was accepted on kickstarter, the crowdfunding never went through. Nevertheless, I am so very indebted to those fantastic backers by showing their support, when I struggled. Massive thanks to these incredible friends, alphabetically: Fareed Armaly, Nerine Buhlert, Yiwen Cyrus, Uli Jaeckel, Hyun Joo Min, Catherine Roche, and Hartmut Schirmacher. The work would not have been able to be pushed through without the help of my mother looking after my cats, and especially everyone that had patience with me during the last years while I was having so little time for them.

These tiny sparks gave me guidance, yet there is one still lingering incited by my father who passed away three years ago. To link from his field of experimental physics to mine of performative arts means bridging a distance. Yet, we connected over a film based on Michael Frayn's play entitled 'Copenhagen', that references the meeting of the physicists Bohr and Heisenberg in the former's exile in 1941. A comment he made while watching, more to himself, that complementarity should be more focused on, still attracts my thoughts. Such leaning towards the thinking with and through fascinated me from early on in the theory of physicist and feminist theorist Karen Barad. Thinking through and with other matters includes that next to Parkour also my cats taught me to look at the night sky, and importantly to listen for that which does not seem to be there.

I am immensely grateful for the experiences gained in all these situations, for the tiny sparks incited, for having met you all.

Authors declaration

I declare that all the material contained in this thesis is my own work.

Images, film material, props and performative contributions by co-workers and collaborators have been assigned accordingly.

Definitions

Baradian terms:

Karen Barad's Agential Realism has a few neologisms and special terms, the most important ones for reasons of understanding are explained in short here:

intra-action: in onto-epistemological terminology defines coming to meaning in relationality. The shifted understanding of intra-action, in contrast to interaction, is marked by entanglements through which the influenced parts emerge mutually affected, producing a different understanding of causality itself.

agential cut / cutting together-apart: the action in an intra-action that allows a situated objectivity, expressing its ambivalence in the together (acting) and evaluating (apart) a situation. By cutting a relational (in-/exclusive) situation is established.

exteriority-within-phenomena: The 'result' achieved in an *agential cut*, albeit no absolute exteriority (outside) is reachable – it is always situated, dependent on apparatus set-ups, as is the derived objectivity.

Parkour / ADD (Art du Déplacement):

Parkour / Freerunning / Art du Déplacement is a generally non-competitive discipline where practitioners attempt to get from A to B by running, jumping, climbing and quadrupedal movement. It has been founded in the 1980s in the banlieues surrounding Paris, France.

breaking the jump: analysing a jump / 'breaking' it into parts or 'crumbs' as Esprit coach Yao Gogoly expressed it.

0. Introduction

“[W]e are immanent to the very conditions we are trying to change, ..” (Braidotti, 2018: 12)

0.1 Outlining the situatedness of the research and its main questions:

The project *moved by being moved to moving or co-constitution in intra-active knowledge production* attempts to contest the binary logic and its specific production of knowledge prevailing in European modernist thought patterns. This is induced by bringing movement as knowledge expression into the foreground as an embodied way of knowing relational to lived experience and its interferences with condition (time) and situation (space). Reference is especially taken towards Haraway's and Barad's practice of diffraction. Agency thus in Karen Barad's terminology instead of pre-positioning objects (and/or subjects) activates them in their relationality, more specifically in their becoming through being-doing. The approach via the iterative rendering of time and space reframes activations as relational constellations of matter(ing) thus undoing self/other, nature/culture, body/mind and construed equivalents of modernist bifurcated models. In this sense accessing the disseminated thought patterns via the diffracting method of new materialism aims to dismantle the static connotational contextualisation of the universalising attitude of the modernist regime of knowing.

The research specifically concerns the researcher's situation described further on as positioned *within* a modernity that fostered European Universalism (Wallerstein, 2006). Barad's proposition of an exteriority-within-phenomena (2007) is chosen as a predisposition for the attempt to rig open the conscious, as well as the entangled involuntary establishment of knowledge and thus consciousness. Agential Realism developed as a method for creating awareness of the emerging entanglements in Barad's own scientific fields of physics and feminist history for Science Studies, also provides an opening for this project to shift from. Yet, the established (white) background invisibility within the established westernised epistemology that provides the grounds of my departure demands serious consideration. The approach therefore is further diffracted with insights from queer, race and plant studies, as well as studies of decoloniality. Subsumed as minor studies (Braidotti) these fields contribute to the request for the urgent procedure of undoing the prevalent logic of the status quo. European Universalisms (Wallerstein, 2006: 71), denoted by the self-claimed right to dominate by intervention, by imposing othering through essentialist particularism

(Orientalism) and the claim of a neutral scientific Universalism, has thrown almost the entire planet under its regime of thought. The European modernist knowledge episteme that with the Anthropocene inflicts an encompassing 'we' onto the world, however has to realise its delusion that there is no empty centre or excluded position that allows specifying such exceptionalism (Morton, 2021: 51).

Taking my situatedness as white European to be influential in thinking towards co-constitutional modes of knowledge production induces the urgent question: How to undo our way of thinking when situated in the messy midst? The foreclosing of any reachable outside¹, though, is best exemplified by the current era's unofficial naming as Anthropocene, nevertheless levels of exposure to its effects vary deeply by positionality. The attempt to confront the done harm, demands to not only face the actual mess, but must ask, how to receive and learn from, rather than to continue violently appropriating or incorporating other culture's knowledges. How to become through and with without predefining the other, as to care beyond a unified definition of self? Braidotti describes the intransitive process of becoming in a Deleuzian sense as empirical interrelational and collective experience. As an ethical and political sensibility that "begins with the recognition of one's embodied and embedded limitations as the necessary counterpart of one's forces, intensity and capacity for interrelation with multiple others" (2008: 33). This however demands for the ethical and political to shift towards an awareness which acknowledges multiple scales and various temporalities (Morton, 2021: 32,66).

This project presupposes as a first step to address the undervaluation of embodiment's contribution to knowledge within European Modernity, a fact that by ignoring apparent continua is mirrored in the oppositional categorisation of body-mind, nature-culture and similar. Tacit knowledge as in sports, crafts and the arts, is widely neglected as a cognitive contribution. Though recent results, such as from neuro-scientific research, show insights into the importance of physical movement for cognition and also mental well-being. Therefore, this project decided to take up thinking through and with movement as a largely neglected way of knowing within European Modernity's cultural framing. Considered equally as a concept framed as motion and a method expressed in various forms of movement, the project thereby attempts to avoid the immediate problematic of appropriation for the

¹ Among others: Alaimo, 2016; Barad, 2007; Manning, 2016; Morton, 2021:

conception to think otherwise. This neither continues an exceptional route, nor ignores other knowledges, and aims to address the underlying systemic patterns. As firstly, gained insights might already exist in other cultures, and second the aim is working towards the unintentional to open the view beyond the systemic movement manifested in thought/habit.

From this perspective then evolves the other major question: Does the thinking through a body-mind awareness indeed inform a different form of agency? An agency more towards a doing-being, thus informing a thinking that cannot solely be regarded as mentally induced, but acknowledges affective encounters and contributions? Further can the deliberate attempt of a 'deviant' move/gesture (like in Parkour) change thought in an intra-active way that diverges from the normative understanding of interaction? And if so, how to account for the incited emergence and affectivity on multiple levels, internally, externally, from micro to macro, from the (human) animal to the planetary (bio to geo)? The proposition whether moving differently impacts on various scales is threaded through the project. The question is, can this implication then also change a route of thought and might influence the way of being in the world, of affecting and being affected, and hence to make a difference in worlding.

While sounding fairly straightforward, accessing thinking differently from within the original system of education (school of thought) involves to stay a moment longer with the troubled consignifications, as a 'shifting of borders from within' (Haraway, 1988, 2016) only can be provoked incrementally. This approach is chosen to realise and address the integral part of a problematic that one's own contribution plays.

Each of Immanuel Wallerstein's three crucial notions of European Universalisms evolves from a position of the unattached and unaffected observer notoriously evident in the mental attitude of the excluded middle or, in Haraway's terms, the 'god tricks' of viewing from everywhere and nowhere (1988: 584; Juelskjær, Plauborg and Adrian, 2020: 18). To address this predominant attitude, both the researcher's position and their research outcome are equally accounted as gained through and within intra-active knowledge production. I use Barad's neologism of intra-action, here, to emphasise that co-constitution is regarded as a developmental process underway within a system and in exchange with further sub-systems. The researcher does not claim purity in doing-being. Any retention or re-establishment of an unaffected outside position is not only non-reachable but would re-instantiate and consolidate the very patterns of movement and thought of European exceptionalism. It is

important to clarify that being excluded is not the same as the self-acclaimed peerless outside position. While the latter is interlinked with purporting to give an overview, the exclusion from a system, or access to options within it, deprives of possibilities.

0.2 European Modernity's universalising intentions

As I locate myself in their midst, who are the distinguished moderns that Bruno Latour discerned as never having been so (1993)? Today's 'we' of the Anthropocene suggests an 'all-in-one-boat' population, that now muddles the once scientifically assigned difference between moderns and pre-moderns or a-moderns, at the cost of veiling the differing impact of imperialism and colonialism. The 'we' here may stand for "the West, though not in a genealogical or territorial sense" as there is "little space left for genealogies, and notions of territoriality are being redefined right before our eyes" (Trouillot, 2003: 11). From Latour's position the modern/a-modern categorisations have been interrupted "with the merging of matters of fact into highly complex, historically situated, richly diverse matters of concern" (2004: 237). While discerning blindness towards oneself as an "integral part of the very modernity machine", his suggestion to 'recall' modernity like industries do with defective parts (Latour, 2007: 20, 22) dismisses the structural set-up of that very apparatus.

The resulting determination of "Eurocentric canonised modes of knowledge production" (Amo-Agyemang, 2021: 3) as individuated form of knowledge rather than an intersubjective relation "has as its correlate the 'radical absence of the othered "other"' (Bhambra, 2014: 118). Following Quijano's argumentation of the interconnected development of modernity/coloniality, Gurinder Bhambra asserts that this mode of knowledge production affirms European Modernity's self-realisation "at the same time as making invisible the colonial order" (2014: 118). Sylvia Wynter identifies here an autopoietic, sociogenic induced, closure "of the macro Western world-system" that is governed by the "present genre of being hybridly human as that of secular Western Man in its second reinvented, *homo oeconomicus*, now (neo)Liberal-humanist cum monohumanist form" (2015: 239; italics in original).

My argumentation tries not to downsize Latour's contribution for the critical historicisation of western sciences and their claim of general objectivity but attempts to add the discernment of Western Modernity's systemic blindness. Locating myself as influenced by and within western epistemology includes acknowledging my own difficulties and failures. I will come to

my situatedness defined through feminist onto-epistemologies, but first want to specify the terrain from where this project starts. The concern is that even if European modernity's epistemology, which generally asserts the values of "Western, White men of dominant ethnic groups" (Wallerstein, 2006: 68) as universal has come to an end, yet its legacies are still cutting rifts.

As argued above, the past is not something that can be recalled to be undone, but must be interrogated "to initiating new dialogues about that past and thus bringing into being new histories and from those new histories, new presents and new futures" (Bharmba, 2014:117). Marco Vieira cites Robbie Shilliam's approach centered on "rehabilitation or reinvention" of other narratives and knowledges that affirms the alterity of the other aside of "'the colonial science of gaze'" (2019: 156). These decolonial approaches confront an understanding that the world can be interpreted from an abstract universal standpoint (Amo-Agyemang, 2021: 6) also in the stance of "the last and most powerful of the European universalisms" (Wallerstein, 2006: 70) - that of scientific universalism.

Despite Latour's correspondence with Wallerstein's analysis that especially the emergence of complexity studies (in natural sciences) and cultural studies (in the humanities) has complicated the situation of a homogeneous approach, the underlying problematic of relevant systemic structures of an Eurocentric approach to knowledge remains. These are still active in the discursive formations of social and economic practices, as well through imperialist attitudes (Oppermann, 2012: 47). The problematic has attempted to be addressed by post-modernist approaches, yet its deconstructive method has often been considered a relativist gesture that widened the gap "between scientific facts and social knowledge" (Stadler, 2000). This becomes apparent in the dismissal of an ethical eco-socio approach as 'soft' (speculative / humanities) compared to the 'hard' objectives (empirical) of scientific research regarded as factualities. A maintenance of structures that are kept in accordance for the existence of 'our' current world-system (Wallerstein, 2006: 59), as "the specific order of knowledge/cognition indispensable to the stable replication and enactment of our present genre of being hybridly human Man(2), its fictive modes" of (neo)Liberal-civilisational kind of macro-world system (Wynter, 2015: 222, 239). An occurrence which features also an (transhumanist) anything goes approach and possibly led to the current era of post-truth factuality.

Recently this system has put itself more obviously into question by ever more horrific widespread 'unintended consequences' across the planetary and, as such, also its system of knowledge production. The ontological gap addressed by Latour that never was but is a political one, is about to realise that its problematic lies in that "the linguistic, social, political and biological are inseparable" (Hekman, 2010: 25). The reverberation of a binary exposition incited by neglecting the acknowledgement and analysis of the excluded factors emerges as relevant and constitutive as included ones (Giraud, 2018). Exclusions or blind spots, as in colonialism or racism, created meaningful silences (Trouillot, 2003), but are neither mute, nor void, nor constituted by "mere lack or absence" (Barad, 2019: 529).

What is forgotten in this set-up of science as the proponent of truth is that, despite being founded on early observations in nature, many experiments can today only be reproduced under so called 'clean' laboratory situations. A point that returns the focus towards insights into the complexity and interdependence of factors that influence the situation and perspective of knowledge production. It is always "a multitude of human and nonhuman entities [harnessing] their collective power to act on and transform the world" (Kofman, 2018). Relevant then aside of the facticity of knowledge production of scientific data, is also the acknowledgment of its systemic influences and positionality within a certain thought collective (Fleck) or in Sylvia Wynter's more pervasive understanding of epistemic instantiation by sociogeny.

This problematic encouraged my intention to push currently non-accessible boundaries forming my own horizon through a feminist situation of embodiment (Haraway, 1988). My conceptual approach draws strong correlations to Barad's onto-epistemology, where exteriority only becomes possible 'within-phenomena' (2007), which I will lay out in the next section. In aiming to depart from the inherited system the concept of unlearning (Singh, 2018), and of 'de-linking' from the prevalent systemic, as expressed by Walsh and Mignolo (2018) as decolonial method are applied. As such, the research is an ongoing exploration and re-writing of the movements and thought patterns of the researcher and the project itself. The re-arranging of structures of thought that become evident through being affected by different moves causes change in more than the routes of synaptic connections in motor activity. Unlikely connotations emerge in different or new constellations as specific

spacetime matters (Barad, 2007). The project experiments with what will show up as something else, of not yet perceived/known, when incited to be moved to moving otherwise.

The idea of self-experimentation, that is, the researcher's awareness of being part of research's 'petri-dish', manifests an essential part of the research. Here imperceptible and sometimes seemingly unrelated aspects, together with the thematically condensed performative presentations, inform practice, and by way of changed readings, also the project's theory. Throughout the last years I scheduled myself to undertake not only theoretical readings, especially in feminist new materialism, but also participated in physical exercises – including Yoga, dance, and Parkour sessions. It started with a fascination of moves that were somehow different, leading to interrogate if movement can change thought. And if so, then how - as movement is so manifold and different each time it occurs. It certainly depends on the inherent body-mind abilities, but where does movement start? In the fingertip or the mind, and what if it is affected in and through the movement of molecules? This extends the field towards the inclusion of matter and opens the question: is movement not rather being moved?

0.3 Critical Posthumanities: Feminist new materialism and minor studies

How to push the boundaries of the Cartesian mind/body split when being educated within a system that has its metaphysics based on criteria of human access and representation? This common mindset that in Speculative Realism became critiqued as correlationist, regards the world apart from the human observer as unthinkable (Shaviro, 2014: 6), or at least neglectable (Gagliano, 2013; Marder, 2015). Alfred N. Whitehead has defined this much earlier as the "subject–predicate forms of thought" (1979: 7). Theories to address and possibly rethink the issue often take their point of departure in a Spinozian approach. Some reach further back, defining Aristotle's bifurcation between sentient and insensitive, life and matter, as the obstacle that till today establishes the paradigm of modern science (Gagliano, 2013: 148).

Crossing in from an artistic practice induced angle, the project of agency is molecular regards itself as interdisciplinary and intends to contribute to an emerging field that considers aspects of theory and practice as profoundly interrelated. The method of thinking and becoming in and through movement, attempts to account for the arcane patterns of life that often are considered neglectable due to their ubiquity. Grounded theoretically on concepts

of performativity, while equally thinking in terms of experiments through performative actions, the project suggests motion as an ontological involved principle in epistemic production. Motion is considered as primal in the discernment of knowledge, not just as processual, but as evocative for these very processes, which iteratively emerge from earlier incitations.² Simplified, the question is, if this could be expressed by changing a movement habit which affectively alters the way of thought, and vice versa.

For a starting position that aims to connect transdisciplinarily between the arts and sciences, Karen Barad's Agential Realism appeared appropriate for its openness to difference. Agential Realism allows not just "some object reacting differently to different probings but being differently. What is at issue is the very nature of nature" (2012: 6). By being related to the episteme of neutral natural sciences, Barad offers the use of a diffractive 'apparatus'/process in performative constitutions the emergence of something showing up differently. Her definition of situated/agential "objectivity is therefore not absolute exteriority but agential separability- exteriority within phenomena" (2007: 184). An objectivity that is based on "an individuation-within-and-as-part-of-the-phenomenon" (2007: 321) that relates to the "marks on bodies" (340) or in her words "about being accountable and responsible to what is real". Objectivity thus is a matter (and meaning) of response-ability.

Agential Realism as a method provides a tool or apparatus for a differing way to think and engage with insights drawing relations between "the Sciences, the Humanities, the Arts, the Social Sciences, and let's not forget insights derived outside of academia" (Dolphin/van der Tuin, 2012: 52). However, these relations are not drawn by following logics of linear causality but propose a different way of linking by way of acknowledging affectivity. Thinking causality not as "interactional, but rather intra-actional" entails to account for the various in- and exclusions which are created by any specific way of causality and appear in their different ways of linking. This crucial redefinition of causality in terms of relationality and mutual affectivity marks intra-action as the defining terminology in Barad's onto-epistemological (2007) theorising. It essentially redefines agency as a doing-being where the "specificity of intra-actions speaks to the particularities of the power imbalances of the complexity of a field of forces" (2012: 54 - 56, 66). Barad specifies the coming to the fore of power imbalances in these agential processes as to evoke an ethics that is "*about taking account of the entangled*

² "No one has ever walked endogenously" Deleuze (1994: 99).

materializations" (2012: 69). *Response-ability* in this context expresses the "linking of agency and indeterminacy" (Schrader, 2020: 69). Importantly then, this is also a non-doing, either as neglect or as 'constitutive withdrawal' (van Dooren, 2016: 46) as a making room are doing-beings in relational entanglements (more in this in chapter 5) in this sense. Ethics then deviates from an 'it is like this' (Ahmed) attitude and constitutes an eminent inquiry into the process of intra-action/agency.

Situatedness and a related partial perspective as the project's positionality, establish as foremost concern an awareness for the narrow realms of the researcher's specific culture. It is considered an essential condition for thinking otherwise not just for the practical experiments, but to 'break' learned habits of thoughts/movements. Therefore, the researcher engages in various experiences of physical movement considered as ex/change inducing. These empirical values become layered and diffracted by reading of and engaging with contemporary theories. Karen Barad's definition of exteriority as only existing 'within-phenomena' in her theory of Agential Realism (2007) establishes the theoretical realm as stipulation that there is no access to an ultimate outside view. The in/determinacy that Barad's approach promotes as an opening towards abilities of response is contextualised as unlearning towards options of thinking/moving otherwise. Unlearning in respect of decoloniality refers to opening a space in "delinking from the assumptions of modern/Western epistemology; or Eurocentrism" (Mignolo and Walsh, 2018: 116).³

While situatedness paradoxically seems to keep the subject pivotal, its concept of partial viewpoints refuses the uni-linearity of knowledge production as assumed in western Modernity. In regards of developments like the human induced climate change, the recent pandemic or the yet unofficial titling of the era as the Anthropocene, such delinking from the European induced view of sameness appears as a mandatory process. However, as a white female researcher, I am part of the systemic knowledge production "that is now in its postcolonial, postapartheid but still liberal (or now neoliberal) monohumanist symbolically encoded configuration" (McKittrick, 2015: 11). A position that is urgently requested to realise that humans are neither solely in control, nor just beholders. Being positioned in the messy

³ For W. Mignolo decolonial thinking and doing aims "to delink from the epistemic assumptions common to all the areas of knowledge established in the Western world since the European Renaissance and through the European Enlightenment." (2018: 106). For Karsten Schulz the "process of delinking does not simply refer to a critical project within western academia, a mere deconstruction of terminologies. It describes a delinking from an epistemological frame that silences and subalternises non-western voices, knowledges, and languages within the totalising hierarchy of a single modernity (Mignolo 2007; Gutiérrez Rodríguez 2010)." (2017: 51).

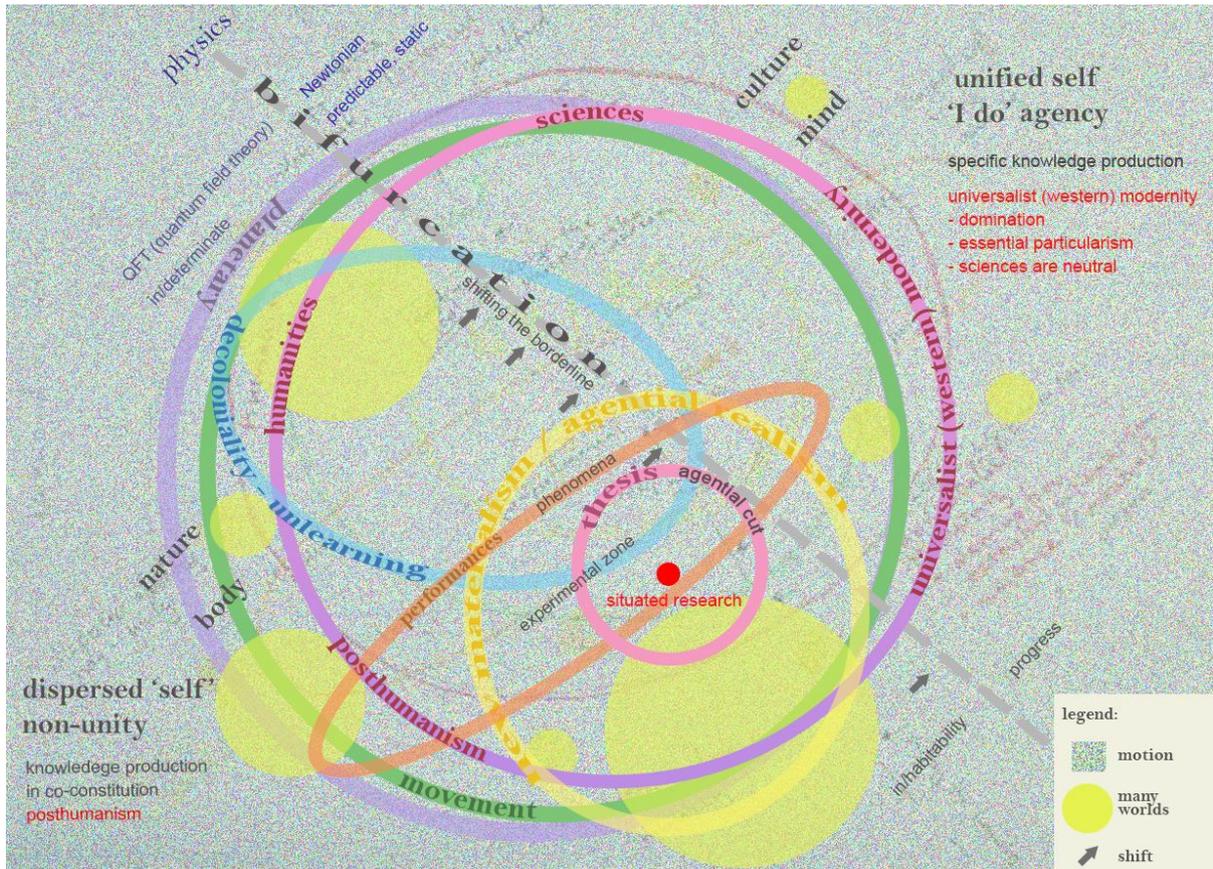
midst (Manning, 2016: 39) that 'we' helped to create, not only weather-wise, demands to affirm the unevenly distributed affectivity. However, this alone will not reverse the interpretation of agency as one-sided. The research therefore argues for exploding the definition of the researcher's unaffected 'lab-situation' towards situatedness, partial viewing and affecting experiences. The project attempts to become aware of the intra-actions' interferences that contribute to the world-making especially from a Northern Hemisphere mindset. The 'we' activated to grasp the Anthropocene still expresses a universalising attitude, which needs to be addressed through the notion of capacity (Wilderson, 2010).

The world's performativity is not just affected by direct human actions, but rather how these are contextualised and thus being perceived. Relevant propositions of intra-actions must include the marks left by denial or misinterpretation. Expressed in racism and environmental injustice, these seemingly theoretical questions indeed establish matter's mattering. Haraway in referencing Strathern (2016: 11), and Barad (2007), have both emphasised the importance of how and through what we relate in doing-being.

0.4 towards an intersectionality of knowledge production

Accessed from a non-essentialist particular feminist new materialist situatedness the project attempts to shift from predetermining modes of thinking in the present era still active in specific polarisations (as mind/body, nature/culture and self/other). At the same time, technological implications and unaddressed economic and social inequalities forecast the specifics of a post-human era. Braidotti's critical posthuman stance forecasts "environmental, social-economical, as well as affective and psychical phenomenon of unprecedented proportions" as infliction of the emerging Anthropocene condition (Braidotti and Hlavajova, 2018). The Anthropocene, a geological term, that contrary to other 'cenes' does not annotate past stratifications, but those of future sediments, indicates a break in universalist Modernity's narration of positive progression. The impoverishing impact that the maintenance of over-developed standards of some areas have on all other humans and non-humans defines a political dimension. It becomes often expressed in the characteristic modes of technological entwinement of nature/culture of this era due to the underlying one-sided definition of agency. This fact provides a crucial point for my argument that is foremost informed by an inter-disciplinary reading of theories of critical posthumanism (Braidotti, 2013; 2018), new materialism (Barad, 2007; Braidotti, 2013; Haraway, D. J., 1988), as well as

thinking through decolonality (Mignolo and Walsh, 2018: 529) and aspects of queer theory (Muñoz, 2009; Preciado, 2013). The queer being ignored by history, which for Virginia Woolf was the white female, now encompasses people of color, indigenous cultures, non-humans and all beings being queer across the Plantation-, Anthro- and other 'cenes'.⁴ Their particularities not only sum up to more than the whole, which in this case is the one-world attitude of western Modernity that currently appears to be re-appropriated by the notion of the Anthropocene despite its multi-faceted appearance.



0.01 - Orientational guide how the research locates itself within overlapping fields. The graph by no means attempts to depict a 'god's eye' view but to visualise the research's situation within the knowledge systems it is grappling with/in. image: m. jaeckel.

To foster a rupture in current thought-culture, various efforts have already been undertaken across the fields. Especially important for this project are the already named authors Karen Barad and Donna Haraway for establishing a critical feminist framework in regards of human-non-human intertwinement. Both also contribute towards establishing insights into the history of science, through their specific work on technology, developmental biology and physics. Rosi Braidotti's relevant critical posthumanism offers an affirmative approach towards the human/non-human divide by her reading through gender, race and postcolonial

⁴ M.Wark indicates attention to the 'cene' as "an ancient rhetorical concept with meaning that include timeliness, circumstance and possibility – the 'critical' moment. [...] Kairos is the time of the break. [...] a nonhuman time." Wark (2019) accessed: 9.5.2019.

studies reworking considerations of contemporary knowledge production. As approached above, the ethical stance of *response/ability* active in new materialism's doing-being agency is considered implicitly generative for the political outcome (Coleman, 2018). More recently the preliminary focus on entanglement as a foregrounding positive engagement also has been brought up in its negative contribution (Giraud, 2019; van Dooren, 2016). Barad however has specifically pointed at the double-bind of in- and exclusion in which her ethical stance requests a thinking that includes the non-human. Problematic, however, are the before mentioned still active human-centred modes of thought, which Braidotti wants to have addressed by a critical posthumanism. For instance, asking about to whom or what currently is discussed as 'planetary habitability' relates provokes most likely a human-biased answer.

0.5 Motion as concept

Motion, as movement in any form, is inherent to matter and establishes the underlying motor of life (Grosz, 2011; Wellmann, 2010: 193). Efforts that attempt to 'rationalise' or abstract change (within this project regarded as movement) into something calculable, are invoked by background assumptions based on known dichotomies (e.g. grand scale geoengineering). These have been established via the before mentioned mind/body juxtaposition and, extended into oppositions of nature/culture and self/other. Providing deeply entrenched settings in current (post)modern societies such dichotomies remain to condition the relationality between some human beings, while delimiting those of others, non-humans and materials on and of this planet as non-culture. This construed oppositional relationality in its fundamental exclusive impact marks a persistent delirious position that assumes a one-sided ability by shunting aside the interdependency of coexistence. As N.Money writes in terms of biodiversity, "that the failure to comprehend [...] the fact that we are soaked in it [micro-cell-organisms], filled with it, made of it, and most of it is invisible - means we lose our sense of place" (2014: 15–16).

The experimental motion-oriented approach aligns a thinking in binaries that opposes differences as 'either/or' towards a 'with/and' continuity. In also addressing body-mind's ontologically intertwined ability of response(ability) (Barad, 2012) in performative actions, the project pursues to evoke it by a response/ability through relationality as a thinking with. Motion and its implied change, whether imperceptible or clearly visible, provides the

overarching notion to reflect upon the aspects of Karen Barad's differentiation between interaction and intra-action. Conceived as an onto-epistemological terminology that defines a coming to meaning in relationality (Barad, 2003; 2007), intra-action rethinks causality in terms of mutual affectivity. Understood as carnal empiricism (Braidotti, 2018: 4) with relation to 'lived experience', it is applied to confront modernist logics and their detached production of knowledge. Movement's unpredictability is exemplarily chosen by considering its performativity also induced by everyday aesthetics. Though being "culturally shaped at every turn" (Noland, 2009: 7), movement's contribution is notoriously undervalued as a form of expression and even more so as way of knowing (Martin, 2015).

Movement in this project exemplifies both a different i.e. tacit (Polanyi, 1966) form of knowing as well as a 'payout' or transmutation of theoretical considerations. References of lived or somatic experience are not only found in Michael Polanyi's work but resonate throughout the philosophy of phenomenology (e.g. Merleau-Ponty). The practical experiments are based on relevant insights established in the wide field of kinesthetic research of Maxine Sheets-Johnstone, embodied (dance) therapies (Payne, 2017), and research into the interdisciplinary field of 4E⁵ cognition (Gallagher, 2011; Newen, Bruin and Gallagher, 2018). The supplementary research into embodiment provides one side and neuroscientific insights like the findings of mirror neurons (Rizzolatti et al., 1996) another. Both are of general interest for dance studies (Bresnahan, 2014) and movement-based research (Cappuccio and Ilundáin-Agurruza, 2020). In thinking towards processual development, the psychologist Esther Thelen and Susan Oyama in the philosophy of science (both on the basis of systems theory) are invaluable contributors. Nathasha Myers' research points at embodied sense making in the sciences at the example of molecular foldings, and Randy Martin approaches sociological developments through gestures and posture in dance.

Key terms taken from these sources are relevant for a re-constitution of knowledge production, especially embodiment, embeddedness, extended and enacted cognition. Together with Oyama's redefinition of phylogeny and ontogeny, the point is made for a transient understanding of development of natures. The co-constitutional emergence of body-mind in the specific environment has also been brought up in Sylvia Wynter's extension to Frantz Fanon's definition of sociogeny. Movement as intertwined body-mind action

⁵ 4 E stands for embedded, embodied, extended, and enacted cognition.

moves-thinks along routes that divert from those of the epistemes of bifurcation proposed by western Modernity. It supports a delinking (Mignolo, Walsh) from these canonised assumptions as preceding unlearning (Singh) for a re-association aside the normative.

Coupled through their specific reading by the respective theory, the above notions establish an orientation for the project's methodological frame conceptualized in and through motion (change) and performativity.

0.6 Movement as method

The research concept emerged from performative lectures intending to point out the physical relationality that grounds epistemology. It was thought to remind to a somatic awareness specified by that not only research, but also the observer, is situated, to challenge the conception of an uninvolved, non-affected and unresponsive other, while accounting the same for the self. The institutional framing of this project as a PhD thesis grounded on artistic practice provides a similar setting, while I attempted a greater degree of oscillation between practice and theory on the basis of interference and diffraction. The creation of a performative zone allowed to experiment with the experiences of response-ability in being with human and non-human others. It was considered to incite a re-thinking of concepts of western Modernity through re-positioning the routes of thoughts by our ways of moving. This meant as a first step acknowledging the utterances and voices of involved human and non-human others in an off-centred arrangement that transposes agency into the subsequent form of doing-being. It could be imagined as Pickering's definition of agency as a sort of dance (1995: 21) that connects intra-actively "the observed and the observer, the cultural and the natural, mind and matter, and material and social elements" (Oppermann, 2012: 43).

While this scenario proved that all involved things (including humans) appear interrelated, the uneven levels of capacity challenge such a flattening onto one and the same assigned level. Leading to a generalisation in de-centring, such replay complicates the assumed ethics of response in an ethic-onto-epistemological approach. As a way to deal with this problematic, the openness at the heart of experience (Morton, 2011: 28) allowed to create the threefold meaning of *response/i/ability*, which demands to consider what is heard, how to answer and which action to take.

some notes on movement:

Movement as method for practice implicitly evokes the fit and trained body as its ‘tool’ or ‘instrument’. Throughout this project, though, movement will not be related to any straightforward solution, that considers a specific way of moving as relatable to any form of smarter thinking. Rather than seeking a definable quality of motion, the research strives for the unusual, the undefined or overlooked communication that motion always entails. The different forms in the minimal and barely visible interaction between humans (mimic, gestures) or between non-human actants (body language; direction; molecular signalling) are not considered in regard of literal translatability, but as minoritarian exchanges that are commonly disregarded. These signals from non-humans or material assemblages that occur from motion become the general impact enhancer, and in this sense the lowest common denominator. This not only recalls Barad’s mentioning of matter as conversing (Dolphijn and van der Tuin, 2012: 48), but also Braidotti’s definition of a neo-materialist vital system, where “all human and non-human entities are nomadic subjects-in-process, in perpetual motion, immanent to the vitality of self-ordering matter.” (2018: 6). In that thinking through the smallest particles of matter attempts to avoid the fallacy of the *bifurcation of nature* (Whitehead, 1920: 26 - 48) that allows to exalt certain humans above others and non-human mattering. Motion is the immanent marker of change, as that which cannot be predicted exactly.

Yet, it needs to be emphasized that the idea of interdependence between movement and what a body can do – also thought-wise – does not reside on the assumption of competition or ableness. On the contrary, it is built on the manifold of movements and the diversity of abilities. Rather than being identified by its spectacularity (Cunningham, 2018), movement is considered in its diverse forms, sizes, and paces, that not only refer “to locomotion but also to growth, decay, and change of state” (Marder, 2012: 28). In taking motion as a grounding / foundational concept, and physical movement as applied method, I attempt to bridge the practical with the theoretical across different fields. This encompasses from macro to micro: moving through the environment (Parkour),



0.02 - Rehearsal for *signalling* – at the *molecular level* at Ambika P3 March 2019, image: m. jaeckel.

dancing, forms of gesturing, and the microscopic scale of signalling in the exchange of molecules. On all these levels, motion's binding aspect indicates practices of communication and ex/change. Throughout this project these practices are transposed and replayed in performative presentations based on movement practices.

0.7 Practice

Training for the somatic and dance related side included movement forms, as participation in Parkour Generations (London) events and regular classes with the ADD (art of displacement) team of Esprit Concrete (London). Regular visits to the sessions of AQ Arts Open Training Sessions (London), who promote all forms of Streetdance (Breakdance, Hip Hop, ..) contributed important impulses.

Visits to diverse research symposia with performative approaches as organised by the ICA⁶, the LCMF (London Contemporary Music Festival) to name just a few, provided inspirational insights across various fields. Some of these activities fostered direct collaborations with dancers and movement practitioners, as the connections developed in frequent 'Playground' visits at Rambert⁷ and the before mentioned ADD activities with Esprit Concrete.



0.03 – AQ Arts Open Training sessions @ The Yellow, organised by Andrea Queens, image: @aqartslondon.

The performance piece *signalling - at the molecular level* was conceived as a thinking though molecular composition or assemblage and its consequent manifestations and changes in the environment and us in it. Presented as a live event at the *Hyphen* exposition on Art and Research at Ambika P3, in March 2019 the piece explored how indeed each move matters, as a co-constituting in movement intra-action its common shape. The collaborative performance brought together very different expressions of knowledge through its various human and non-human participants. The conception of the piece included a co-operation with Berlin-based



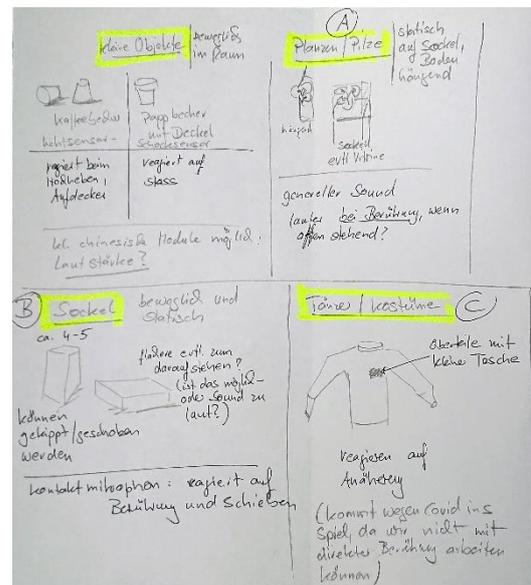
0.04 - Still from documentation 'signalling – at the molecular level' at Ambika P3 March 2019, camera: Lene Vollhardt; GoPro.

⁶ <https://www.serpentinegalleries.org/whats-on/the-shape-of-a-circle-in-the-mind-of-a-fish-the-understory-of-the-understory/> [accessed 29.06.2021]

⁷ <http://www.rambert.org.uk/join-in/events/the-playground/> [accessed 10.05.2019]

interface designer Gabriela Guasti Rocha, who contributed her INTUERI e-textile pieces. Fitted with wireless transmitters, the costumes picked up the modulating droning buzz-like sounds of electro-magnetic waves and allowed the performers to activate a normally imperceptible acoustic layer when moving through the space. The combination of noises sparked by movement also provided the 'sound' that together with the speech of a performative writing text, aimed to underscore that thought and action emerge in diffractive interference with the layers of their surroundings. In chapter four, details of the development, workings and gains of the event are laid out and analysed. The performance was accompanied by a symposium panel, which focused on the threefold meaning of the notion of *response/i/ability* as the ability to notice a response received from somewhere, to act responsible, and the ability to give a response. The invited speakers Kasturi Torchia (ADD), Gabriela Rocha (e-textiles) and Kat Austen (sound) were either involved in the project or had influenced my attempt of thinking otherwise through movement, noise, and response in some or the other way.

The second major performance project, planned for Spring/Summer 2020, was finally realised as a film project during Autumn 2020 and Spring 2021. The filming of *reverberating interferences – explorations into thingness* took place under Covid related restrictions at Wayne McGregor Studios in London. It was conceived to explore indeterminacy (Barad) and the uncertainty of change (Rose) that are set in motion through patterns of movement and countermovement by bodies of any kind. Human and others - subsumed as 'things' were amplified by small electronic devices. Throughout the earlier months Martin Hug, an electronic experimenter and musician based in Spain, developed Arduino implements that allowed to create an audible modulation of the ongoing interfering actions. This intention was partly in response to feedback from the performers and also from audiences alike after the signalling piece, to give 'things' a clearer voice so that a particular response could be realised.



0.05 – Concept for *reverberating interferences – explorations into thingness*. From exchange with Martin Hug, August 2020, drawing: m.jaeckel.

the point of 'thingification' across the array of diverse humans and other matter obviously created complications. It was addressed as the difficulties of the unlearning process for the in Europe situated subject-object which has a likeliness to retreat back into the juxtaposing framework European modernity imposes. Understandings of



0.06 - Still from *reverberating interferences – explorations into thingness* includes interactive moving image projection *Untitled_1* by Lilia Strojec at Wayne McGregor Studios, October 2020, camera: Lilia Strojec.

'after' as the wiping of a clean slate again seemed to instantly activate representative frameworks of transparency (Ferreira Da Silva; Glissant) in a wider frame. Proposals of plans like geo-engineering or negotiations of slow violence (climate injustice) dismiss the demanded in/determinacy that is needed to have different voices, narrations and species appear. Therefore, the metaphor of the after of the afterimage suggests an ambiguous space allowing indeterminacies. In other words, this approach references the notion of de-linking as developed in decoloniality studies as a making room of unpredictability for an unlearning. Such space has been considered as the 'afterimage' of agency – the moment of the vanishing imprint before one can see a differing shape. It needs to be stated that the writing of the chapter intersected with the development of the piece - again due to the pandemic.

The PhD project concludes that interferences emerge through any number of ways and cannot be avoided, meanwhile what is crucial is how they are addressed, that is responded to. As subsonic reminders, barely audible, thus unheeded, reasonings might already transport repressed and neglected embodied aspects (Myers, 2008) of affectivity. It is thus that we are never just moving on our own but are moved because something else moves – and maybe just molecules. Reverberating interferences initiated in intra-actions become audible as sounds, voices, noises, non-acoustic signals (gestures) emerging from movement in and across matter (inanimate things, plants, and humans) providing the urgent chance to unlearn the known habit. To allow these noises to be heard and have them seep and condensate differently - intra-actively - means listening/caring.

1. Conceptual review

Metamorphosis (change) did not mean a transformation of the substance or form, rather solely in the movement of a material. (Wellmann, 2017: 184)

1.1 Motion as conceptual frame

The intrinsic relation of motion expressed in the body-mind interlacing compels to consider movement (including that of thought) and the body's sensuality, that incites all thought (Whitehead, 1979: 190), as intertwined affectivity. In folding against each, the mind-body complex is constituted as a continuum (Braidotti, 2018: 1). Movement experience, whether wilful as in jumping or unconscious as in breathing, blood flow, bacteria settlement on the surfaces of skin or gut (Mol, 2013), in cell development or in exchange at a molecular level, are essentially involved in any understanding of being *in and of the world* (Merleau-Ponty, 2002: 421; Reynolds, 2005: 9). The change a move elicits initiates a difference - an unfamiliar position or sight, a sensation that incites thoughts by rearranging known patterns. Movement ability for change (Grosz, 2011; Ravaissou, 2008) emerges most clearly on the backdrop of its various repetitions. In their variations repeated patterns form habits, providing the normative on which a break of routine as a rupture becomes possible and thus perceptible. Behaviours of motion patterns on the microscopical level may often only become visible in a changed affectivity, as recent examples of mutations of the Covid-19 virus show.

The research renders a heightened attention and evaluation to what is in the background or barely visible. In performative settings, André Lepecki argues, this not only augments foregrounded objects and actions, but provides the speculative that invokes the political (2017: 158). Contextualising dance with possible change must be seen in relation to Randy Martin's analysis of movement's emergence in societal developments (2015), which I will revisit later. Allowing therefore for the incitement of the unforeseeable, the "imperceptible movements, modes of becoming, forms of change, and evolutionary transformations that make up natural, cultural, and political life" as processes of distinction (Grosz, 2011: 1). The PhD project brings this in relation to embodied definitions of activity through a Spinozian-Deleuzian approach that is similar to Erin Manning's definition. Thinking through bodies in movement in this sense interrogates "how knowledges/worlds are created" (Manning, 2007: xvi). To address an understanding for the deep entanglement of matterings that is projected by this outline allows to apply the common notion of interaction in the extended sense of

Karen Barad's neologism of intra-action. Formulated as one of the key terms of her onto-epistemological theory of Agential Realism (2007: 178–210) Barad's specific interpretation of intra-action will be laid out in the next section. The term's theoretical application essentially contributes throughout the practice-based part of the project to an understanding of movement and engagement. Based on close analogies to some dance practices (i.e. contact improvisation) intra-action's ontological application allows to interpret the embodied experience as diffracted body-mind relationality. Situating the mind in its interdependency, rather than regarding it as a singularly instructive advisor, the mutual conditioning of being moved while moving is emphasised. Motion, then, is never solely incited by will, but is always enhanced and constrained by inherent and surrounding matterings. Agency, rather than definable as one-sided, becomes the mutually affecting doing-being link that enables the action.

In relation to the above, the project sets up a comprehension of motion by specifically referencing its inherent performative features. The performativity of applied key notions is therefore not only understood in an epistemological sense, but probes and applies them also empirically, to exemplify an *onto-epistemological* understanding (Barad, 2007: 89). As already introduced, intra-action, as a conceptual notion, runs throughout the theoretical and practical part of the research as an always present under-current. Similarly active within the project is performativity extended from Judith Butler's interpretation (2002, 2010) as involvement in constituting social manifestations. In Barad's usage of performativity, the world's processuality reacts integratively to human interference.

1.2 Knowledge production

*[...] we are quite mistaken in thinking
that there is a possible knowledge of things as unrelated. It is thus out of the question
to start with a knowledge of things antecedent to a knowledge of their relations.* (Whitehead, 1919: 12)

Based on the above described framework of motion and its complicity with the notions of intra-action and performativity, the project aims to address agency as a polyphonic resonance in the human/non-human interplay. It is the attempt to decolonize a thinking that sees itself constituted by a one-sided capacity to act. An interpretation that centres around mastery enhancing a self that remains unaffected by all formations, the surrounding and concurrent events (Latimer and Miele, 2013: 14, 17). Granting thinking to be creative and

inventive, equally a doing and a performance assigns it a materiality that cannot solely be ascribed to humans. As a movement in and of thought, it becomes a material act that informs discursive practices beyond known utterances. For Barad such approach allows to contest “habits of mind that grant language and other forms of representation more power in determining our ontologies than they deserve” (2003: 803). Peta Hinton’s description of inherent structural performativity of the normative points out that “what emerges as a global scene of political production, [...] suggests that the political subject [...] is repeatedly inscribed as the very means by which the world seeks to understand itself in its sexed [racialised, etc; my insertion⁸] difference” (2014: 110; see also: Latimer and Miele, 2013: 16). These insights addressing the performativity of the constitutive frames that form us, and through our doing perpetually manifest as world(ing) around, however allow also to break open self-established limitations. This understanding of being immanent to the situation, detaches ‘us’ from the outside of a discrete position that would allow an universalist view (Braidotti, 2018; Haraway, 1988). Such acceptance of entanglement, therefore, does not imply the ability to draw borderlines in a traditional sense, boundaries of phenomena rather are established in multi-vocal resonance and must be considered supple and permeable in both directions.

In consequence, the framework of the research conveys itself as a partial view, accepting both to be immersed in, as well as drawing from, the production of knowledge. The project anticipates looking at the definition of knowledge from an entangled and affected position, which implies revising what counts as legitimate ways to access and as well as how to formulate it. Objectivity gained from this position always needs to be contextualized. For Latimer and Miele it is thus a “world of materials as well as sentient beings, all of which need to be incorporated into the fold of a more inclusive understanding of the social, including into understandings of how, and what, knowledge is produced.” (2013: 9). Knowledge exists as explicit but also as tacit knowing in between the separated fields of action and language. Ways of knowing, though, established outside the modernist anthropocentric norm are often devalued. Ideas are recognised as socially sanctioned when considered as rational and objectively founded. They are therefore regarded as reliable theory (see also Latimer and Miele, 2013: 6,20,23), and manifested within the established discursive system of western Modernity in a dichotomic mapping (Mignolo and Walsh, 2018; Prokhovnik, 2002: 6).

⁸ Peta Hinton originally refers specifically to feminism and does not include race (2014: 110)..

Identifying the concepts of knowledge achievement is essential for my project for discerning the underlying specifics and routines that a society establishes and confines itself within. Ludwik Fleck, a Polish microbiologist and pioneer for the history of science, formulated the insight that epistemology and its consequent consciousness is based on a specific *thought collective* (German: 'Denkkollektiv') e.g. that of science (Fleck, Trenn and Merton, 1979(1981): 106; see also: Sady, 2016). Fleck developed a *situated epistemology* (Löwy, 2015: 527) where knowledge is defined as being achieved in a certain constellation of time and society/culture. In 1946 Fleck specifies as *touchstone* features of scientific cognition "the historic singularity of their development, the structure of relevant thought collectives, the characteristics of the scientific thought style" (Fleck (1929) in: Cohen and Schnelle, 1986: 127). Marked by the specificities of discursive practices, epistemological cognition is for Fleck "a relation between the individual subject, the certain object and the given community of thinking" ((1960) in: Cohen and Schnelle, 1986: 154). Not interested in producing a social epistemology by constructivist assumptions, Fleck's focus is on the fact and its emergence. Therefore, he attempts to trace the social ontology of "the social, collective, practical elements" (Latour, 2007: 12,13) as important achievements of collective empiricism (Löwy, 2015: 518).

The chemist and philosopher Michael Polanyi is another proponent for whom knowledge was always achieved by personal commitment. Knowledge, in his account, is not a status that can be achieved, knowing rather should be considered as a processual activity (Polanyi, 1969: 132). By resting on a "subsidiary awareness of particulars in terms of a comprehensive entity", knowledge for Polanyi is grounded in the tacit realm by eventually including far more aspects as we can tell. Tacit knowledge is often defined as the untranslatable knowing, as not being transferrable through verbal explanation. Harry Collins describes it as "knowledge that is not explicated"(2013 (2010): 1)⁹ a fact that grounds the tacit dimension on a deeply rooted knowledge of 'how to do things'. However it also provides an anticipation of knowledge without being yet expressible, may even coincide with cognizance.¹⁰ The situated relationality of tacit knowledge may delimit or empower depending on the derivative awareness that is

⁹ Together with Robert Evans, Collins graduated specified knowledge, specifically tacit-laden knowledge, into various classes. In 'rethinking Expertise' (Collins and Evans (2009 (2007)) tacit knowing becomes sub-classified in categories as 'interactional expertise' (only linguistically shared knowing) and 'contributory expertise' (which includes practical knowing). This distinction [...] has come under some critique for its suggestion also to classify people according their expertise (in this case: technical vs. political) (Ribeiro and Lima (2016).

¹⁰ In his example Copernicus is taken to have anticipated Newton's insights. (Polanyi (1969: 133))

provided “by the structure of knowing based on subject matter with the cultural background of knowing (1969: 133-134). Description of the underrated and ‘ineffable domain’ for the inherently tacit in knowing often relates to embodied abilities. Polanyi’s attitude towards cognition as neither being passive nor “the only possible insight into something given”, corresponds with Fleck’s statement, of research as “an active, live interrelationship, a reshaping and being reshaped, in short, an act of creation.” (Fleck (1929) in Cohen and Schnelle, 1986: 49). For this project’s approach towards knowledge both, Fleck’s analysis of the epistemic and Polanyi’s integration of *tacit knowing* (Polanyi, 1966b), establish a viable ground, building a bridge to the contemporary research in embodied cognition.

The above insights corroborate that contributing concurrences inherent in the creation of knowledge cannot solely be defined as a human-based one-sided wilful action. The research therefore engages with works across different fields on the basis of systems theory, which provides insights into interrelated structures. The work of the psychologist and philosopher of science Susan Oyama addresses the nature-nurture divide on this basis by emphasizing that the transactions between an entity and its surround are aspects of one single system. The essential mutual interchange is highlighted by an organism altering their environments and thus “being altered by their interactions” (Oyama, 2000b: 7). Models, as Oyama’s developmental systems approach, consider the body as an open system, “whose interactions with its environment significantly shape its neurochemical functioning”. This provokes an understanding for the “internal dynamics of material processes”, which may be transposable onto apprehensions of social stratifications (Coole and Frost, 2010: 18).

The project’s concern in terms of knowledge production is: how is (a specific) meaning established and how can it be changed? It is about the non-seeable that is neglected by the systemic, but generally is in sight, provoking the objection how can it be perceived?

1.3 Matter / coming to meaning

Neither the ‘subject’ nor the ‘object’ receive a reality of their own; all existence is based upon interaction and is relative. (Fleck (1929) in Cohen and Schnelle, 1986: 49)

Creativity is both a mode of inventing and changing a structure. In western modernist interpretation creative acts have been limited into an almost exclusive feature of ‘humanity’, dismissing its recognition for other critters and materials. A narrowing that prevents perceiving the creative force of matter expressed through intra-active processes of

contribution, adaption or also mutation. Being regarded solely as resource marks matter as “a reservoir of tractable commodities”, not acknowledging “the precarious system and dynamic entity” it is (Cohen and Duckert, 2015: 5). What can be known of the world is always “matter-mediated (enabled, impressed), an intimacy of substance, force, flesh, trope, plot and weather” (Cohen and Duckert, 2015: 11). Foundational for the viable part of appearances, matter informs any being as part of and in world becoming. In fact, intertwined and multi-dimensional worldings, as the molecular divisions of cells, foster mammal’s physical becoming. Processual becoming does not end with the development of an embryo but is iterative. A fact depicted by the human dependence on billions of microorganisms settling into and enabling the gut. Humans and other organisms not only live in an intimate and messy mingling co-existent with bacteria, but co-evolve and are co-constituted (Helliwell, 2014). Jeffrey Cohen and Lowell Duckert’s statement that the elements “are the outside that are already within” (2015: 13) marks partiality as connecting feature. Molecular biology provides increasing evidence that “co-evolved animal–bacterial development may be the rule, not the exception” (Gilbert, 2002: 212) pointing at human interrelatedness with elementary matter. Gut bacteria form us (Cryan and Dinan, 2012), depending on how we cater or destroy the climate for their existence by the food provided. Recent research, also charted in diverse popular science publications (a.o. Enders, 2018; Yong, 2017-2016) points at the interdependence between human diseases (a.o. autoimmune disorders, gut inflammation) and the gut’s micro bacteriological climate (Costandi, 2017; Lorimer, 2016). Evidently, the statement, that each individual then comprises (and requires) the formation and continuity of a collegial assemblage of organisms (Gilbert and Bolker, 2003: 3) is barely deniable. Insights on our interspecies relationality as becoming obvious through gut’s or skin related itinerants blur or shift the boundaries of body outlines not only on an atomic level, but also on a microbial and metabolic level. As Annemarie Mol states for “the metabolic body, inside and outside are not so stable” (Mol and Law, 2016: 54). Bodies are not only cellular and permeable, but also serve as (temporary) hosts for viruses. Not least the recent pandemic reveals zoonotic diseases as overspill in systems processes caused by human interference (Quammen, 2013).

The notion of matter in this regard implicates a range that reaches from an almost invisible interference in physics (atom/element) to what encroaches similarly small into the midst of beings and things (cell/molecule). Matter in its form and meaning occurs never once and for

all, but evolves iteratively within the processes of worlding by performatively responding in the (re)working of (all) bodies, and selves (Barad, 2007: 151). A thought also resonant in Sarah Whatmore's interpretation of *re-turn* (2006), not as a turning towards the already known, but as over-turning it again. What actual matters and produces meaning never emerges due to solitary agency, but within a certain surrounding situation, a specific setting in space/time. Whatmore thus extends Jane Bennett's statement that "[h]umans are always in composition with nonhumanity, never outside of a sticky web of connections or an ecology" by the supplement "of matter" (Bennett, 2004; Whatmore, 2006: 603).

Portrayed as a sole resource, the specificity of geological sedimentation of the Earth is neglected in its own materiality. The excavation of minerals and rare earth that make their way into media products (Parikka, 2013) and other electronic devices are often entangled by economical routes with impoverished lives. Their material components, however, often only resurface when devices are 're-turned', often along similar routes, as waste. Decay as mourning utterance that interferes the habitual process of commodities, marks waste as transformational residue of an entangled part. Rigorous listening may confront us with a meaning that we overlook by assuming that matter transforms into another form by taking another shape, but rather retains its form while discarding its original concept (Malabou, 2010: 50). Destructive plasticity as traces upon traumatic experiences may be read in a phylogenetic way as indices of a shared ecology of matter (Fenton, 2018). The difficulty in perceiving latter transformations as expression of matter(ing), lays not so much in eventual changes in form but in dismissing the provided process. Western Modernist understanding conceives matter as passive or inert without "own modes of self-transformation, self-organization, and directedness". Agency is exclusively assigned to humans who, through "cognitive abilities, intentionality, and freedom" maintain in autonomous decisions "the right or ability to master nature" (Coole and Frost, 2010: 10). This results in the exceptionalist presumption of some humans to reside oppositional to nature's mattering.

The impetus of 'thinking apart' is found in Western creation myths. Matter, as that which has to be formed, rather than to consider its mattering as meaning, is deeply rooted in "philosophical and scientific approaches to the phenomena of life" (Oyama, 2000b: 1). Instead of "versions of the nature-nurture antithesis" Oyama's developmental systems approach supports a more dynamic understanding of biological and evolutionary processes.

Development is evident on every side in “perception, knowledge, and volition”, contradicting the conception of our role as detached subjects (2000b: 87–88; also: Mol and Law, 2016). Dismissing the decisive positioning of the subject and object, that implies knowledge production is an action enforced by an agent on the known, Oyama’s view essentially differs from usual interpretations of interactionism. Her assertion of mutual dependence defines interrelational circumstances as provision of an informing situation. Compositional development thus emerges in simultaneous action as ontogeny (Oyama, 2000b: XVI, XV). Motion’s propulsion, as essential in such ontogenetic processes unfolds in developmental response-ability that is expressed in constraints and options. Relating this back to integral intra-active - relation these presets mark for Barad responsibility as “an iterative (re)opening up to, an enabling of responsiveness”. In defining this not as the enforcement of “some existing possibility, but the iterative reworking of im/possibility, an on-going rupture” (2010: 265) it provides the acknowledgement for many ways of knowing. However, to be considered is that the known can also be used, misused, ignored or destroyed (Oyama, 2000b: XX).

Meaning, as that which provides form as/to matter, is not given “once and for all” (Barad, 2007: 430n). Being re-defined according to material-affective aspects, matter is part of the process that constitutes meaning. Iteratively reworked in each encounter, this mattering includes the self-realised as embedded within and extended into the surrounding. The affirmation of the other organism or other nonhuman mattering as threaded and lived through us, as enabling us, implies that every being/becoming (Barad, K. M., 2012: 219) allows to apply strategies of knowing differently.

Motion is an intersecting concept that incites and underlines the connectivity between living bodies, and inert matter. The integration of ambiguity that forecloses an immediate classification of an objective knowledge, recasts experience as encountered in subjective affectivity a reminder that “perhaps every look to every other (human or animal, living or non-living) is split undecidably between knowing and not knowing” (Colebrook, 2014: 12). These thoughts rerouted my interest towards waste, as a curious mutation of the known into a just definable form, yet with something else to tell. The final performance project *reverberating interferences – explorations into thingness* considers if listening can uncover an untapped knowledge of inherent possibilities - or at least a mourning of shunned relationalities.

1.4 Response/ibility

[..] the creative possibilities that become available when we recognise each other (and each 'Other') as we come together on the basis of a commitment to decolonization [..] must emphasize openendedness ..."

(Gaztambide-Fernández, 2012: 61)

The insights of developmental systems theory suggest that boundaries, even if drawn as immobile markers through the implied acts of in- and exclusion, implicate an entanglement. As a co-constitutional indebtedness, the self then becomes a diffracted and dispersed identity, established in encountering human and/or non-human 'others' (Barad, 2010: 265).¹¹ These intertwinings of and through human and non-human matterings indicate trajectories of a responsibility, which rather than providing a script to be lived by poses an inherent or immanent ethical call. Being response-able to our entanglements in the world requires an openness towards 'other' contributions that must give up on the western modernist belief in exceptionalism. Knowledge production, based on implicit cultural structures, brings forth a worlding not only by (more or less thoughtful) regulations, but through the very performance of daily activities. No institutional features and constructs, as the devices installed and applied for perception and interpretation (media and other technologies), exist as structures per se outside a certain multimodal *spacetime mattering*. As various research (a.o. Parikka, Nixon) exposes, the impact of western Modernity's neglect of mutual entanglement is manifold. It encroaches on multiple 'others', like essential species as bees, but also the weather, and thus also affects those who assume being exterior (Barad, 2012; Butler, 2002; Coleman, 2014; Haraway, 1988).

The acknowledgement of the human being as a multiply entangled site of *naturecultures* (Haraway, 2003: 3) demands a re-adjustment between ontology and epistemology (Latimer and Miele, 2013: 12). Oyama's before mentioned interpretation of genetic research, termed as constructive interactionism, had pointed out that animate organisms and inanimate matter always need to be regarded as mutually concerned. Recognising the researchers' bodies as "affected and changed in their practices" (Latimer and Miele, 2013: 11–13) situates them in 'affected perspectives' further prone to be impinged by methods, as well as 'thought collectives' of their time. This fosters a shift from the epistemological construct of one-sided transmission to an onto-epistemological definition of continuous construction in interactive

¹¹ Barad (2010: 265): "Entanglements are relations of obligation – being bound to the other – enfolded traces of othering. Othering, the constitution of an 'Other', entails an indebtedness to the 'Other', who is irreducibly and materially bound to, threaded through, the 'self' – a diffraction/dispersion of identity. 'Otherness' is an entangled relation of difference (*différance*)."

processes. The artistic researcher Annette Arlander defines relational entanglement of the various components she engages with in her work as “a pre-condition, rather than a result, of the action” (2014: 26), which manifest in specific phenomena” (2014: 7).

Arlander’s insights resonate in Barad’s statement on scientific practices, which understands agency as engendered — a becoming in doing-being. Rather than attributed to either side, agency emerges as intra-activity, a mutual interplay that touches upon and affects all factors. The chance for an internal ‘objectivity’ is given by *agential cuts* within this scenario thus appearing as *exteriority-within-phenomena* or relative measurements. Established marks materialising within this exteriority/objectivity allow measuring, or the setting of a frame, but in difference to general universal objectivity claim relationality. This entanglement of contributing “to the differential mattering of the world” demands not for an ethics construed along routes of knowing but one which emerges as responsibility from being “an agential part of the material becoming of the universe” (Barad, 2007: 178). Consequently for Arlander, ethics are not defined by accordance to an universal account of claiming a ‘right’ response towards exterior/ised others, but rather in Barad’s sense “about responsibility and accountability for the lively relationalities of becoming of which we are a part” (Arlander, 2014: 31). The chiasmic entanglement enacted by cuts or measurements does not just separate but bind ‘things’ together in intra-active co-constitution by determining involvement. Thus, the emergence from iterative multiple and crisscrossing interferences entails “an ethical obligation to intra-act responsibly” towards inherent particular possibilities and demand continuous reworking “what matters and what is excluded” (Barad, 2007: 235).

Aside from Barad’s reworking of an intrinsic ethical call, Joanna Zylinksa suggests for ethics as cognitive-affective efforts. Her proposal to rearrange the solidified moral strata for the differentiating processes of matter attempts to account for the often unconscious, participation, collectively or distributed, to possibly produce a better “geo-moral landscape” (2014: 21). In this respect, it is worth to quickly trace the shift of western moral sources towards internalization. In the early-modern conception of reason, rational control objectifies the body, world, and passions, which provides a profound ethical change as “the sources of moral strength can no longer be seen as outside us” (James, 2006: 103). In contrast to Charles Taylor’s philosophical approach, Teresa Brennan retraced the decline of the transmissive affectivity on a psychoanalytic background. The conception of a bounded “self-

contained Western identity” is accompanied by an outside projection of “unwanted affects such as anxiety and depression in a process commonly known as “othering.”” (Brennan, 2004: 12). This neglect of affectivity is compensated by coercing “the biological, discursive and moral expansion of human capabilities into an idea of teleologically ordained, rational progress (Braidotti, 2013: 13). Internalised as faith of self-regulation and intrinsic moral values, today these are an integral part of western Modernity. Such then provided the ground for a social constructivism, that distinguishes between the given (nature) and the rational founded, and constructed (culture), shifting the inexplicable and unfitting to the ‘other side’. The abjection of what is defined as irrational, emotional, natural, proposes it as an outside oppositional to the cultural. Humanism casts “a civilizational model” of integrative self-reflexive reason that is central to European modernist ideals as an universal idea. For Braidotti, Eurocentrism is “more than just a contingent matter of attitude: it is a structural element of our cultural practice, which is also embedded in both theory and institutional and pedagogical practices” (2013: 15). Braidotti’s method of affirmative undoing focuses on essential western modernist notions as subjectivity like “consciousness, universal rationality, and self-regulating ethical behaviour” (2013: 15). Yet, the core qualities of Braidotti’s anti-humanist informed project towards a “complex and relational subject framed by embodiment, sexuality, affectivity, empathy and desire”(2013b: 26) provide some resonances with Brennan’s rather biological, psychoanalytical neuroscientific challenged understanding.

Demands for a change towards a politics of relationality and connectedness have gained some momentum in feminist, queer, race and postcolonial studies. Examples are Prokhovnik’s feminist critique of dichotomy (2002), and more recently Braidotti’s demand for the development of ‘minor studies’ (2018) to (re)include these ‘othered’ affective knowledges of ‘missing people’. For the project *being moved to moving* affectivity as encompassing to affect and being affected, for selves and others, is absolute central.

1.5 Agency

Yet with the microbe, human agency, the choice of which animals to ‘live with’, as Donna Haraway puts it, is entirely out of our hands. (Helliwell, 2014)

How to think otherwise and of oneself as threaded through by others infuses the question carved out in the last section. The project’s metaphorical frame proposes an almost literal

interpretation of *moved by being moved to moving* to initiate such thinking towards a critically posthuman de-centred position. Together with the theoretical supplementary title *co-constitution in intra-active knowledge production* the setting attempts to propel seemingly well-defined notions, as the one of agency, onto a new field as ecologies of matter(ing). In this context, Karen Barad's Agential Realism is regarded as offering possibilities to provoke a de-centring, a tumbling out of the steady rotation around the western modernist self, which for too long thought of itself as pivotal. Within this project, motion presents the lens to encounter and eventually access different ways of being and its congruent knowledge production. Leaving behind a fixed notion of understanding and knowing, the approach aims to further grow into an entangled mode of *being moved to moving*, inciting anew and anew.

The first crucial move, defined by de-centring, as de-occupying the centre, also introduces different problematic aspects, that will be addressed later on. Importantly de-centring is not understood as a neglect of responsibility, but rather as redefinition implying the chiasm of being touched, affected and moved to moving, as constant exchange of and for *response/i/ability*. Jack Reynolds retrieves in Maurice Merleau-Ponty the intertwinement of embodied subjectivity as "never located purely in either our tangibility or in our touching, but [...] in the intertwining of these two aspects" (2005: 132). In a similar vein Vicky Kirby interprets Merleau-Ponty's description of the world itself as "the flesh" as a recasting of subjectivity that as worldly becoming blurs clear divisions "between ideality and materiality, Culture and Nature, and even the separation of the human from its "other"". Endowed with "the subtle intelligence usually reserved for human subjectivity" (Kirby, 2011: 117 - 118) it (the flesh) provides a non-dualistic place of emergence (Reynolds, 2005: 88). In Braidotti's contemporary terms the constitution of subjectivity is "a co-operative trans-species effort" comprising an assemblage "that takes place transversally, in-between nature/technology; male/female; black/ white; local/global; present/past." She argues taking a partial viewpoint as a relational "expanded self" offers a transversal route for thinking "across previously segregated species, categories and domains". The inclusion of non-anthropomorphic elements furthermore dismantles "the logic of the excluded middle" as western Modernity's point of view (Braidotti, 2018: 12).

Applying Braidotti's critical posthumanism demands to interrogate the prerogative position of the researcher's situatedness as European white at "the alleged centre of the world"

(2013b: 54) towards becoming-minoritarian or nomad. The transformation necessarily questions the continuous belief into the universality of the European hegemonic thought regimes. Demanding a “socio-cultural mutation [towards] a multi-ethnic, multi-media society” (Braidotti, 2013: 53–54) must include minorities, differently abled people, people of any colour other than white, and most women, children and animals – all that has been denied agential *response/i/ability*. Interpretations of the era still express their claim for sole control not just in the naming of the ‘Anthropocene’, but in the neglect of climate justice, or counter it with megalomaniac repair fantasies of geoengineering. Dominant progressive growth narratives are oriented according to western Modernity’s time-based linearity while neglecting the affective marks any intra-actions leaves on human and non-human ‘bodies’. It ploughs a ground of ignorance that discards acknowledging the scars of exploitation of the entangled but ‘othered’ sides. As cultural theorist Zylinska remarks, humans are neither the only, nor even the most important actants, nor can we “affect or control all occurrences within that world” (2014: 21).

De-centering thus accounts to rethink (human) agency, defining all bodies as *objects of knowledge* (Haraway, 1988), which *intra-actively* participate in the creation of meaning. These objects of knowledge emerge as entities from entanglements by *agential separability* established through affective and effective acknowledgment of subject-object-relations. In Barad’s terminology agency “is an enactment, not something that someone or something has” (2007: 178, 235). In the iteration of becomings agency is not attributed to either side but emerges in and through intra-activity as a doing-being. Barad defines agency as opening up “possibilities of change entailed in reconfiguring material-discursive apparatuses of bodily production, including the boundary articulations and exclusions that are marked by those practices in the enactment of a causal structure” (2007: 178). Expressed in formulations of Agential Realism agency allows a coming into being of ever different *phenomena-within* according to multiplicities of *spacetime-matterings*. It thus provides a valuable option to think about coming to meaning differently, reworking in- and exclusions as never settled, but always preliminary conclusions. Barad’s interpretation of agency closely relates to *agencement*, which as Vinciane Despret points out, in the translation of Gilles Deleuze’s work into English became transferred into ‘assemblage’. Both, Despret and Braidotti (2014), emphasise the obvious link between *agencement* and agency in the original French expression, and the important feature that *agencement* does not indicate a fixed status. “An

agencement”, rather “is a rapport of forces that makes some beings capable of making other beings capable, in a plurivocal manner, in such a way that the *agencement* resists being dismembered, resists clear-cut distribution.” (Despret, 2013: 38). This specific sense of multi-lateral mobilising of “an event, a becoming, a compositional unity” has been applied by Deleuze and Guattari in their work, allowing *agencement* “to shift, to break up and to participate in further connections” reflecting its non-belonging.” (W.P. Phillips, 2006).¹²

Mattering then in this sense must be accredited affected possibilities, which in regards of the notion of agency constitutes a re-definition as a not entirely graspable incident. To return to agency as enactment then means for transformation to become truly recompiling it has to be affective on all involved matter(ing) - and not just on the ‘othered’. In transversal of such insights from the field of ontogeny, the origination and development of an organism, its indisputable feature as a multileveled developmental system of dynamic and complex interactions needs to be emphasised. As Oyama states, these interactions not only address more than one level of an organism, but also furthermore “participate in wider ecological complexes”. This complexity exceeds “ideas of mutual definition, dependence, and influence” that commonly is assigned genetically controlled development. In Oyama’s biological philosophy the idiom ‘developmental systems’ already suggests, that rather than being unidirectional, ““control” is instead multiple and mobile, distributed and systemic” (2000a: 5) - a drifting resonance affecting several levels.

Oyama’s *developmental systems theory* contrasts a systems theory based on ‘operational closure’. Replacing the ordinary understanding of interaction with her notion of *constructivist interaction* defines organisms and their environments as “relevant aspects of, and can affect, each other” (2000a: 3). In contrast, autopoietic systems (Maturana and Varela, 1980) understanding assumes an outside not to be affective to the same extent. This is based on that assumption that systems can be influenced just via coupling, and are contained in operational closure. In the transference to social systems, as Niklas Luhmann did, this causes some impasse as the systems relative (i.e. selective) dependence defines the outside as ‘unseeable’¹³ and thus unknowable. Katherine Hayles has attempted to develop a modified

¹² A detailed analysis of the problem of translating *agencement* with *assemblage* in Deleuze & Guattari is in ‘Agencement/Assemblage’ by John Phillips (2006).

¹³ “What Hayles appreciates in Luhmann’s position [“(one does not perceive when one perceives”)”] is that he recognizes “that closure too has an outside it cannot see” (ibid.: 98). This leads us to acknowledge, on the one hand, the fact that “the very interlocking assumptions

version for Luhmann's concept of systems theory through the development of her constrained conceptualism. Establishing the ambiguity of 'riding the cusp' allows Hayles to conclude that while "reality is what we do not see when we see", in "interaction with reality is what we see when we see". In reaching towards "the flux" as the zone of interaction the connectedness to the world (Hayles in Timeto, 2011: 159) Frederica Timeto attests by this approach a step towards Haraway's notion of interference. Hayles thus provides the enactment of a generative practice that confronts and reworks existing representations, rather than proposing new oppositional versions of it. This argument for a performative understanding of representations attempts to provide a start towards how to access actual knowledge production.

It may be asserted that 'riding the cusp' still implies a traditional understanding of agency that dismisses focusing on the interactional components. "Once we stop relying on a central agency" attention is guided "toward often-overlooked "background" factors" that become available (Oyama, 2000a: 5-6). In some sense Oyama addresses here the problem of various degrees in capacities that in Barad's redefinition of agency becomes foregrounded. One essential point can be taken from Oyama's *constructivist interaction* is the influence of interaction between what is considered inside and outside for emergence in developmental processes. The acceptance of permeability or intertwinement of both, she argues, would also be capable to break open the "interlocking habits of thought and practice" (2000a: 11) and consequent stereotypes.

1.6 Bodies

.. *there are not just many ways of knowing 'an object', but rather many ways of practising it. Each way of practising stages – performs, does, enacts – a different version of 'the' object.* (Mol, 2014)

One of Barad's essential concepts is the *agential cut*, a cutting together/apart - that allows to think or measure something as discrete. The notion expresses that the 'result' always entails the traces of its intra-active co-constitution through the determining involvement, i.e. established in- and exclusions. How then to describe bodies from this perspective when it is assumed that boundaries resulting from (intra)*agential cuts* within-phenomena are emerging in a multi-vocal resonance? Borders certainly must be considered as supple and permeable.

used to achieve closure are themselves the result of historical contingencies and embedded contextualities." (ibid.: 98)." in Timeto (2011: 157).

Mol and Law use the description of semi-permeability (2016: 52) that the body enacts in situations of illness when a metabolism gets out of balance. The physical system as such is leaky as “[m]etabolism, after all, is about eating, drinking and breathing; about defecating, urinating and sweating” (Mol and Law, 2016: 54). Bodies further exceed in regard of their parasitic or symbiotic entanglements with microorganisms (Gilbert, Sapp and Tauber, 2012; Helliwell, 2014) traditionally imagined boundary limitations. The renowned biologist Scott F. Gilbert is among those, who challenge “the generally accepted view of “individuals”” (Despret, 2013: 35n) by defining them as symbiotically entangled rather than as singularities.

The proposition that the individual is a ‘dividual’ rather than solitary has more recently gained resonance in philosophy and political sciences. Levi Bryant asserts in a recent weblog entry that the persistent tendency to abstract things “from the fields in which they dwell” cannot be upheld. Regarding what (human) bodies can do, he states, there is “no aspect of our action that isn’t a collaboration, a pleating, of our body and field” (Bryant, 2017). This appropriation of the dividual as being barely conscious of its field of dwelling exceeds the immediate surrounding and recalls Deleuze’s remark of becoming dividable in and as masses, samples, data, etc. (1992: 5). In fact, the continuous entanglement within contemporary technology systems has led to an excess “endlessly divisible and reducible to data representations via the modern technologies of control, like computer-based systems” (Williams, 2005: 5).

In anthropology the term individual predominately has been used to establish the binary of the western modernist individual self. Tellingly the term serves here to define the autonomous (modern) actor, in contrast to the embedded dividual who not only is defined by tradition, but also place (Smith, 2012: 53). The anthropologist Karl Smith argues against such a decisive division between the in/dividual, that establishes the binary interpretation of modern vs. traditional (or unmodern in Mignolo, 2018). Smith again emphasises the inward related way of orienting oneself to the world of the “highly individualised conception of the ‘Western individual’, which Charles Taylor has dubbed the ‘buffered self’”. An attitude that represses essential dimensions of being-in-the-world compared to an understanding of the human subject as “a thoroughly permeated being—one that is permeated by social others; by socially ascribed meanings, roles, norms and mores” (Smith, 2012: 59-60). The porousness of the organisms in regards of affective transmission recalls not just Oyama’s biological

developmental systems approach, but also Brennan's psychological oriented access to affect. Affectivity breaches bodily boundaries and as such incites "physical changes that manifest themselves as feelings of sorrow, gladness" or even trauma (James, 2006: 105). The demarcation of such physical traces of body's affectivity appears adequately addressed in Mol's request to be understood as a 'doing' (2016: 61n18), as effects incited in intra-action, rather than something that one has (as feeling). 'Doing the body' always comes with metabolic and physical implications incited by and inciting further "affective connections with the surrounding environment and others in it" (Brennan, 2004: 19).

Jan Slaby, working at the intersection of the philosophy of mind, social philosophy and philosophy of science, emphasises that in an emotional episode the corporeal dimensions of the lived body's affectedness are part of the core process. He describes affectivity and agency as interrelated in that "affectivity is a dynamic, temporally extended process—the very dimension of an agent's active responding to and engaging with the world" (Slaby, 2012§ CLII). This positions affectivity as the basic sense of ability and agency that is tied to the lived body. Produced as "effects of circulation" (Ahmed, 2004: 8), feelings thus are affecting/shaping bodies in the encounters with human and non-human others. Bryant in his aforementioned blogpost refers to the moon and its impact on the human body (i.e. the gravity of things) as model of a decisive field of dwelling (2017), which not only emotionally, but also physically affects. Consequently, bodies need to be considered as places of adaptation and (ex)change.

McKenzie Wark introduced "third nature" (1994 / 2006, 2017) to accredit our current 'field of dwelling' as heavily effected by a further level marked by technological developments, a vectorised topology demarcated by "an envelope of information flows" (Wark, 2016: 5). Yet, the technology that enables "third nature" sediments as material (media) fossils that are thoroughly entangled with first nature and second nature (Parikka, 2015: 119). These insights shift the meaning of Marshall McLuhan's initial slippage of message instead of message (1967).¹⁴ His misspelling involuntarily expresses how (media) technologies knead (massage) the sensual sphere of bodies (first and second nature). Concluding from the corrected version of 'the medium is the message' (i.e. defining third nature), the technology we use not only

¹⁴ McLuhan frequently punned on the word "message" changing it to "mass age", "mess age", and "massage"; *The Medium is the Message* was originally to be titled *The Medium is the Message*, but McLuhan preferred the new title which is said to have been a printing error.; http://en.wikipedia.org/wiki/The_medium_is_the_message; (accessed 11.09.2017)

influences our soma and sensori-motor systems, but that medium messages implicitly ‘massage’ (via material usage, waste) across all three entangled natures. This ‘message-massage’ becomes a multi-levelled process, as laid out by Parikka (2015), because technologies are (and) matter in many ways. They not only transport messages, but as all matter do incorporate it, thus adding further meanings (of mattering) to the ‘transported’ flow of information.

In Barad’s sensual abstraction these meanings are expressed as “matter feels, converses, suffers, desires, yearns and remembers.” (Dolphijn and van der Tuin, 2012: 59). Matter’s contribution as repository in the intra-active process of knowledge production indicates non/human others as co-constitutional. Consequently, our bodily substance as part of first nature is inevitably involved and responsive (affected) to any differentiation in mattering, and by that in constituting meaning. The corporeal body-mind complex establishes an intersection that in itself ‘hosts’ nature and culture, both nowadays further entangled in *third nature* (Wark, 1994 / 2006). Other (matter/ing) and self (matter/ing) are enacted in processes of doing-being (aka agency), which never solely are incipient to a self but emerge in participation of other and the traces enacted. Such involvement is marked by settings of being affected, moved, etc. however it may be intensified or diminished by the provided level of capacity. The level of capacity provides an important and troubling point to which I will return.

Barad’s notion of agency suggests a comparison with Despret’s reference to Deleuze and his usage of *agencement* as “an active process of attunement that is never fixed once and for all” (2013: 38). Despret, while assigning affectivity only to the living organisms, defines it as a flow of forces of sensual experience, that “enacts and articulates agency” (2013: 38). Barad’s account though, extends the realm of agency, contrasting Foucault and Butler, she specifies that not all forces that are “at work in the materialization of bodies are [...] social, and the materialized bodies are not all human”. Agential Realism produces causal relations intra-actively rather than predefined as “cause” and “effect”, thus both become “intra-actively demarcated through the specific production of marks on bodies” (2007: 235–236).

Important in Barad’s redefinition of agency as a doing (2007: 178) is the entanglement (addressed by her as “we” to which I will return later) that undoes exceptional assumptions of sole unaffected and unaffecteding action. While providing a situated *exteriority-within-*

phenomena as option of objectivity that never is settled ultimately Barad's approach opens up to reconfigurations by increasing the awareness of "indeterminacies entailed in exclusions". Acknowledging a multifold of possibilities inherent in iterative reconfigurations though means that "[q]uestions of responsibility and accountability present themselves" at each moment. As before mentioned, Barad regards ethicality in this sense as interwoven into the fabric of the world. "[T]he call to respond and be responsible is part of what is" (2007: 182) always resonates.

1.7 Co-constituting

Our major predators are microbes, and our immune responses against invasive bacteria and viruses offer another example of developmental plasticity. (Gilbert and Bolker, 2003: 6)

World-becoming's performativity endows each of its many inhabitants and matterings with partial viewing points of worlding by situating them in multiple-levelled affective relationality. There is no one universal way to think or practice, rather "it matters what ideas one uses to think other ideas" (Strathern, 1992: 10). Donna Haraway iterates Strathern's insight as de-centred re-formulation that it is relevant "what thoughts think thoughts, what descriptions describe descriptions, what ties tie ties" (2016: 12).

Taking up this perspective Annemarie Mol acknowledges that what becomes perceptible, differs according to the applied practices. Thus she speaks not of one object, but of an "object multiple" - which while not one, is less than many (Mol, 2003: 55, 82; 2014). Such understanding counters "the Euroamerican tradition in which different people may each have their own *perspective* on reality, while there is only *one* reality – singular, coherent, elusive – to have 'perspectives' *on*." (Mol, 2014). Mol's studies are based on medical practices of the body supporting a sensibility for the importance for specific situations, and therefore provide insights into the complexity of being affected in different ways. More generally speaking, ontological multiplicity emerges for Mol from the fractured complexity created by different practices, thus the body appears as multiple object. This point of view is provoked by both, the partiality of situatedness, and according to Oyama, the manifold, multi-leveled way organisms and their environments are intertwined. Always participating across wider ecological complexes makes an object appear as more than one, and as having different realities. Though, aside its different versions that are developed through various

practices these object-realities are multiply entangled with one another, relating back to the multiple one.

In case of the complex position of viewing in this project a dancer and their observer certainly have different experiences, while each enacting their position in relation to each other. While the dancer may have voluntary reasons to perform, by being observed, both sides become in the doing-being field of agency - affectively entangled, while creating and perceiving interferences with the surroundings. I am bringing this example because the action of observing intertwines specific points of Barad's theory as well as the complexity of the multiple object that Mol brought forth as one. Even observing entangles us as "agential part of the material becoming of the universe" (2007: 178) in this sense responsibility does not emerge because we chose to observe or dance but because of the acknowledgement of part taking. Realising to be part of the larger material arrangements does not mean that "our" cuts alone cast change, yet that their involvement in certain developments can be denied. Rather, the enacted mattering in these cuts must be seen as (naturecultural) impact of any specific constellation.

Up to this point the situation is just a flattened one, where the viewpoint of speaking from within the western modernist system tries to get awareness for the position it wants to leave. Barad's theory provides in the opportunity to acknowledge the affective marks on bodies effected by our intra-actions that "contribute to the differential mattering of the world" (Barad, 2007: 178). Related to a European situatedness I took my specific partial view, to interpret the era of the Anthropocene as a hint, to realise marks left on human and non-human others. Thereby recognising that it is in the language and the attitude of thinking which often renders back to the all-inclusive, yet exceptionalist attitude. It is exemplified in the 'we', implied by the era of the Anthropos, as referring to all humans as the same, while the 'we' indeed is multiple. Not all humans were involved in the same way nor are assigned the same capacity. As such from within the exceptionalist perspective the level of capacity (Wilderson III, 2010) has to be factored in. A similar factor occurs for non-human matter, there is response out there, but as long as 'we' measure by means that only relate to exceptionalist interpretations of capacity we do not realise, that each move matters in its specific way. The guiding thread in the research attempts to answer how to gain awareness for the multi-modal levels of co-constitutional movement. How to realise all other

(matter(ing)) as threaded through the self (Barad, 2010: 265)? Acknowledging being *moved when moving* could help change our routes of thought.

2. Methodology

2.1 Movement as method

The acknowledgement that moving means also being moved aims to shift the perception away from the understanding of the self as the sole initiator. In accordance with Barad's theory this does not mean that accountability is undone. The objective instead is by affectively activating *response/i/ability* on multiple levels to alter routines in habit and thought into slightly different pathways. This positions movement as initiator and relevant for ways of being and doing in experimental performance settings. Movement, commonly objected as major area within knowledge production, applied as method within the project attempts to contradict this view through the diffraction of two different threads. The first one, considers embodiment as establishing a movement informed foundation on the background that almost all of us explore our environment first through quadrupedal locomotion. The last years have brought an increasing interest into fields touching on embodiment (neuroscience, philosophy of mind, etc), with a specific interest emerging in the fields that cross into AI research. A second clue is established by the fact that movement creates and defines space, which is to be used to de-centre especially the western modernist self. The attempt is to realise an experimental understanding for the ongoing co-constitution with other matter(ing)s - human and non-human. As outlined before the project positions itself as interdisciplinary by taking its cues from fields as various as New Materialism, post-Deleuzian theory, postcolonial critiques, crossing into the area of dance, performance and movement studies, as well as practicing these. Knowledge production here is conceived by a literal understanding of *being moved to moving* that attempts to reactivate reasoning as mutually affective position.

Looking at dance, which also was my personal entrance point,¹ provides some initial hints, that movement not only establishes a concept, but may as well serve as method. Traits are multifold and are found across movement-related disciplines of which dance is just one. Aside of this, interest in motion emerges across the fields, from neuroscience (Gallagher) to social analysis (Slaby) and philosophical speculation (Nail). Insight on human behaviours related to findings of mirror neurons (Rizzolatti *et al.*, 1996), stating that viewing activates similar neurons in the observer than in the practitioner who moves or act, allows to assume

¹ On my weblog <http://www.mindgap.org/> I review performances and dance pieces since several years.

that watching especially as an exchange method of tacit knowledge, is in its significance underrated. My own experience in the field of performance (but also craftsmanship)² informed me about the implicit value of tacit knowledge across cultures. Anthropological research confirms that knowledge exchange is not restricted to the articulation in vocal language, but equally is practiced through the communication of practical skills with and through the body (Marchand, 2010: 197, 202).

My education was informed by a performance tradition of practices that broke with conventional settings, represented by such artists as Joan Jonas and Ulay (Uwe Laysiepen). Importantly, these also provide some overlap with movement practices and patterns in dance, especially in regards of social and political reflections since the 1960s. The early postmodern developments around New York's Judson Church are widely known for their turn towards movements of the everyday as performed by Yvonne Rainer, Steve Paxton, but also for un-orthodox usage of space as by Lucinda Childs (placing the audience outside the gallery) or in Joan Jonas outdoor performances. Randy Martin, himself a dancer and sociologist, recognises some of these movement patterns as indicators of social and political change. Although strictly concerned with dance, he distinguishes the performers "as sentient agents, and [...] dance studies as a field capable of revealing singular aspects of the world" (Kowal and Siegmund, 2017: 2). In Martin's analysis it was especially the break "with the vertical, transcendental lines from which all movement worthy of value descended" (2015: 171) that formed a new language, and expressed via *social kinesthetic* the signs of the times. Dance history, despite an early turn against "the exalted body of the creator" (2015: 167) had been covered by "the cult of genius" (Wark, 2017). By "replacing God with gravity" in the ways that Rainer, Paxton a.o. attempted by choreographing "the movement of bodies in space" to accessible logics, these avantgarde experiments provided an alternative language of sensibilities (Martin, 2015:



2.01 – Joan Jonas, outdoor performance *Songdelay*, 1973; Image courtesy Electronic Arts Intermix (EAI), New York.



2.02 – Ulay, *There is a criminal touch to art*, 1976, Image Courtesy the Ulay Foundation.

² Work as ceramist in Europe and Asia.

10, 172-173). Postmodern dance thus establishes a recognizable and 'legible' kinesthetics of the times or era as "it provides form for that what otherwise might seem inchoate and unregistered logics of moving together" (Martin, 2015: 171). By refusing the limits of what counts as movement in dance the postmodern avantgarde pushed its boundaries towards "an opportunity to recognize the kinds of association of bodies that are available in this expanded realm" (2015: 177). While likewise extending the forms of what is thinkable.



2.03 – Left: Yvonne Rainer, *The Mind Is a Muscle (first version)*, 1966. Performance view, Judson Church, New York, 1966. Right: Yvonne Rainer, *Parts of Some Sextets*, 1965. Performance view, Wadsworth Atheneum, Hartford, 1965. Robert Morris, Lucinda Childs, Steve Paxton, Yvonne Rainer, Deborah Hay, Tony Holder, Sally Gross, Robert Rauschenberg, Judith Dunn, and Joseph Schlichter. Photos: Peter Moore © Estate of Peter.

Aside of social kinesthetic developments in the sensorimotor expressions of the dancer, Martin also discerns socio-economical developments. Following the eccentric routes of derivatives after the financial crisis in 2008, the dancer's body in its original flexibility (2015: 146) literally becomes 'incorporated'. Indeed dancers today have a much wider background ability to invoke different forms of movement, and it is this 'postmodern' adjustability that allows to be abstracted as a commodity (2015: 174). As de-centred social kinesthetic that prepares the decolonization of the body any surplus value to the mover's inherent knowledge cannot be approved. Embodied values are rather solely read as features of precarity and risk full undertakings. Wark compares this precarious flexibility to a Post-Fordist virtuosity, where similar to Williams' *Structures of Feeling* (1977), "a social kinesthetic might be a disposition that exists prior to its articulation, as a sensibility or habit" (2017). While this may sound premonitory kinesthetic as being tacitly informed may indeed have some of these abilities. In this context it must be considered that postmodern practices are derived from various movement forms, as e.g. the

pedestrian, slave dances, the indigenous Hawaiian practice of surfing (Martin, 2015: 11), martial arts and urban culture and, as such, respond to and sometimes resist the given situation. Adjusting to whatever may provide a stage, postmodern performances



2.04 – UNTETHERED 3.0 by Boy Blue for *Breakin' Convention: Social DisDancing – Dancing Out of Lockdowns*, 2021, Sadler's Wells with Jonzi D, image: screenshot of announcement trailer.

mainly explore and experiment in their specific ways not just ‘what a body can do’, but in its relationality.

Movement activities such as Parkour, skateboard, street dance, and urban space choreographies, entail critical utterings of embodiment by subverting the purpose of the built environment (Borden, 2001; Jaeckel, 2014; Ong, 2014b). With a history based in every-day practices and street culture, dance performances today include a diversity of bodies moving differently and mostly abandoning radiating horizontal approaches. Yet, as the analysis above attempts to show, these movement forms are always threatened by being encompassed into purely sportive or commercialized routines. While not being able to avoid that their kinesthetic patterns are being absorbed into what Martin defines as *social kinesthesia*, these independently developing movement forms create their own strategies to renew their inherent resistance or resilient attitude. While postmodern dance appears to shift towards artistic performance, Streetdance versions, Parkour and other Urban technics try to revitalize and adapt their (often powerful) founding philosophies as their real surplus factor against consumerism - to make ‘something out of nothing’.³ Indeed, the immaterial aspect that accompanies performative arts provides as a strength provides a problematic for its documentation, and will be addressed in the project section.



2.05 – Jonzi D, Artistic Director of *Breakin' Convention: Social DisDancing – Dancing Out of Lockdowns*, 2021, Sadler's Wells, Jonzi D in announcement trailer, image: screenshot.



2.06 – AQ Arts, Open Training Sessions @ The Yellow Pavillion, b-dance battle between Daniel Heimler and Ade Onanuga, 2017, image: m.jaeckel.

Stagings of performative lectures that combined talks (readings) *(re)turned*⁴ by physical movements of the lecturer and/or movers, provided an initial starting point within this project. This considered the creation of interference or diffraction patterns by attempting to

³ Title of a session by Max Henry at the Parkour *Rendezvous Gathering XIII*, London, 17.-19. August 2018 (accessed: 20:08.2018; <http://parkourgenerations.com/?pkgevents=rendezvous-parkour-gathering-xiii>)

⁴ Meaning of *re*-turn, not as a new turn, but as an option to turn something over, look at it from another angle, as has been defined in texts of S. Whatmore, P.Hinton, Hughes & Lury.

reference knowledge as generally shared and intersubjective. For these symposium or panel contexts, the stagings surprise the audience and their affective experience is regarded as leaving marks for the interrelation of mind and body in the onlooker. Including a paradoxical or irritating element into a lecture performance has a certain tradition in the performing arts. Just to name a few people who influenced me among them are the artists Andrea Fraser, Adrian Piper and Coco Fusco, all of whom play with the performativity of roles to address critical subjects from arts internal institutional critique (Fraser) to critical self-interrogation (Piper) and frankly addressing gender and race issues (Fusco). I had staged an early performance in a similar sense on the colonial history of rubber products.⁵ However, the settings in these more recent performances now attempted to play out an understanding of agency as a doing-being in a Baradian sense. A further fundamental idea, here, provided the consideration of cognition as environmentally *embedded, embodied, extended and enacted* (Rowlands, 2013: 3) thus augmenting intersubjectivity experimentally into a co-constitutive approach within a specific production site of knowledge. Through intertwined affectivity, thinking and experiencing inform considerations on movement, and vice versa. Each motion, including that of thought and of the body's sensuality, is unfolding from and towards the other. Thus, these performative movement experiments not only explore in presenting, but also in listening/writing motion-based options for opening and rupturing the known. In creating an increased awareness of intertwining and co-constitution these movement experiments restructure the perception of the environment and thus 'the other' as entangled relations.



2.07 – Coco Fusco, *Observations of Predation in Humans: A Lecture by Dr. Zira, Animal Psychologist*, lecture performance at the Studio Museum in Harlem introduced by the scholar Donna Haraway, New York, NY, 2013, image website: <http://www.thing.net/~cocofusco/performance.htm>.

2.2 Intra-action

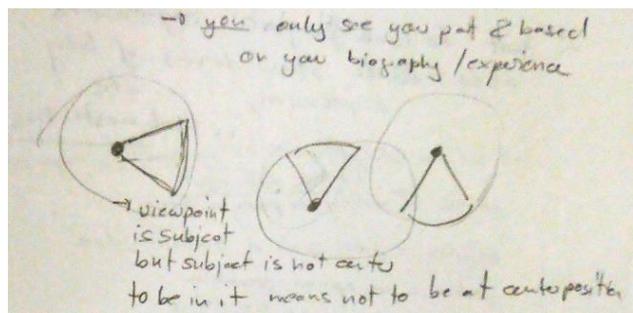
The material and the discursive are mutually implicated in the dynamics of intra-activity (and enfolding) (Barad, 2007: 244)

The neologism intra-action redefines certain forms of interaction (Barad, 2007: 178–210), indicating a mutually affective interference or diffraction expressed with the change from the

⁵ *elastic classics*, performance lecture and artistic multiple, 2000.

prefix 'inter' to 'intra' and in causality. It provides a conceptual shift to comprehend complex entanglements in what were previously considered as unaffected entities. Of interest is the focus on the consequences is how these implications affect the interpretation of human as well as non-human agency. Whitehead already had suggested it to be a misconception, assuming "to start with a knowledge of things antecedent to a knowledge of their relations" (1919: 12). This displays a congruence to Barad's argument, that through specific agential intra-actions the boundaries and properties of the components of phenomena become determinate and thereby establish constellations of meaning. A specific intra-action always involves a particular material configuration of the "apparatus of observation", i.e. the enactment of an *agential cut* as cutting together/apart. In contrast to the Cartesian perennial distinction between subject and object the *agential cut* effects a separation only on the basis of a local resolution of the inherent ontological indeterminacy within the phenomenon (2007: 333 - 334). This move abandons a continuous 'objective ratio' that takes a "conquering gaze from nowhere" (Haraway, 1988: 581). Instead this project's positioning accords Barad's concept of *exteriority-within-phenomena*, as mentioned, a conception to uphold objectivity for scientific purposes, while admitting to a general relationality. Therefore, an inherent part of the project is to maintain an awareness acknowledging that what accounts for episteme is established by a distinctive method. Such a position entails to recognise that there are always different intrinsic possibilities, as well as the admittance of limitations of knowing. Those limitations are often preconceived by in- and exclusions, that enable (respectively limit) access to resources by way of intra-acting establishing a specific background of *relata*, to use Barad's terminology, i.e. cultural coinage. Through this positioning within a limited and exclusive perspective it becomes further obvious that, despite emerging from an interdisciplinary point of view, the project's attempt to tackle the system's methods is based on sources of reference mostly gained from within this very system. A counter balance is created through a selection of sources focusing on fields, that Braidotti addresses as the 'minor' sciences (2018). Here research attempts to transverse fields as feminism, to STS, to critical theory, critical whiteness, gender and queer studies and issues of equality and racism to other knowledges and forms of knowledge production. Obviously, the outcome is as much dependent on the researcher's selection of these components, as on her applied "measuring" (methods).

The problematic that emerges from a situated perspective for a scientific approach is that, to some extent, a generally valid methodological accessibility or objectivity is required. Abandoning what would be a “classical ontological condition of exteriority between observer and observed” Barad defines *agential separability* as fundamental in providing “the condition for the possibility of objectivity. ...[T]he *agential cut* enacts a local causal structure among “components” of a phenomenon in the marking of the “measuring agencies” (“effect”) by the “measured object” (“cause”)” (2003: 815), as such providing an *exteriority-within-phenomena*. Pointing at the specificity of her theory, gained in the field of quantum physics, Barad declares not to be interested in providing an analogical strategy that would foster an extrapolation from micro to the macro (2007: 24). Her focus pivots on extracting epistemological and ontological issues that become apparent in rigorous examinations “of implicit background assumptions in specific fields”. Emphasising the relationship between discursive practices and the material world, Barad’s intention is to distil widely applicable philosophical foundations that challenge and redefine “conditions for objectivity, the appropriate referent for empirical attributes, the role of natural as well as cultural factors in techno- scientific and other social practices, the nature of bodies and identities, and the efficacy of science” (Barad, 2007: 70).



2.08 - Notes on de-centring. August. 2018, drawing: m.jaeckel.

Applying Barad’s method of *material-discursive* (2007: 132-185) interrogation is conceived as applicable for this project specifically because of its consideration from a position within. Reflecting as such the researcher’s situation, but also the pre-given epistemological structures, the foremost concern is to address agency as a key notion defining human action as a unique and indivisible force (Despret, 2013). Despite Barad’s analysis of the structures of epistemological production in science, the project’s approach to accessing movement with and through Agential Realism becomes complicated by that theory belonging to the very same structures of the measurement systems. This is countered by the argument that assuming an unaffected ‘outside’ position is a delusional thought experiment. In terms of decolonial thought, the project considers working through the very confinements of thought and knowledge production to avoid appropriation and create a space for unlearning. Contesting the centrality of western Modernity by the acknowledgement of situatedness

leads to an inevitable centring on self-experience. An accruing paradox of de-centring by centring, which puts the subject at the focal point of research, is addressed by experimenting with the intra-active notion of agency approached as *being moved to moving*.

2.3 Performativity

All bodies, not merely "human" bodies, come to matter through the world's iterative intra-activity – its performativity. (Barad, 2007: 152)

By the end of the 1960s/early 1970s, performance art had established a set of defining characteristics that reflected the influence of earlier 'happenings' as Allan Kaprow termed his action in the 1950s. The term was also used for the actions of the Dada and Futurist movements at the beginning of the 20th century. An important factor for the early generation of performance artists was that these were unique events which left nothing behind except a few props and traces. Therefore, performance art was initially positioned as if more outside art market criteria, although that stance was arguably shown to be invalidated by Marina Abramović's retrospective at the New York MOMA in 2010 York. While performance art relies heavily on performativity, the art form as well as the



2.09 – Allan Kaprow, *Fluids*, 1967. Courtesy Allan Kaprow estate / Hauser& Wirth. Photo: Julian Wasser.



2.10 – Marina Abramović, *The Artist Is Present* (2010), Museum of Modern Art, New York. Abramović's former partner Ulay joins her during her performance at her career retrospective. Image © 2010 Scott Rudd.

term's meaning has been subject to major changes. In terms of this, Judith Butler's writings in the 1990s are still an essential reading. By addressing the notion of performativity as a constitutive force, with potentially subversive features it provides a processual way for understanding the normative functionality that defines the subject. First analysed in her book *Gender Trouble* (2002) Butler identifies how the repetition of (regulatory) practices establishes the (bodies of) subjects. Soon, though, she had to address the misunderstanding that social recognition through discursive conditioning "precedes and conditions the formation of the subject: recognition is not conferred on a subject" (1993a). Stressing here that the subject is formed discursively defines performativity as stipulated repetition of predetermined norms, and not a "radical fabrication". Established norms, which animate and

constrain the gendered subject, cannot just wilfully be thrown off, yet through the performative aspect these also provide “the resources from which resistance, subversion, displacement are to be forged” (Butler, 1993a: 22). One important attribute of Butler’s insights is how these can be extended, such that norms or regulatory practices are by their performative impact themselves mutable. Even if only addressed by an incremental shift, this reciprocal factor of the normative then turns these (norms) themselves into the subject of iterative change in their iterative replay. For Barad, therefore, it is the performativity of reiterative and citational practice by which discourse produces the effects it names. These, in turn, manifest as phenomena (-within) of regulation and constraint (exclusion), hence participate in the discursive production of meaning. In Barad’s posthumanist definition, discursive practices “are themselves material (re)configurings of the world through which the determination of boundaries, properties, and meanings is differentially enacted.” (2007: 151).

In my understanding, performance art still transports elements of these inventive and subversive forces for modulating the ways in which we are “observing, describing and intervening in the worlds we are part of” (Coleman, 2014: 42 -43). Playing with this force, performativity displays its inherent capacitance to contribute to theoretical ideas in discursive practices. Originally emerging from a theory of speech patterns (Austin, 1975), Judith Butler’s notion of performativity distinguishes itself from Austin’s terminology of performative utterance. Studies in performativity are no longer limited to the analysis of structural patterns and theories in fields of feminist, queer, and performance studies. Among others Butler (2010, 2015, 2013) allocates performativity’s transformative qualities as extended into the fields of political and legal studies. These not only appear in the “perform or else” demand of neoliberalism, but also through the realisation of performativity’s subversive and thus transformative abilities in counter movements. The performance theorist Lepecki discerns a momentum for such development, especially at the intersection between (dance) performance and activism (2017).

Especially interesting for the project are Butler’s clarifications regarding the notion of performativity in relation to agency. After the publication of *Gender Trouble* (2002) the tendency was to define performativity close to theatricality. While conceived as a mode of visual perception, theatricality as interpreted solely in this sense is degraded to miming

(Reinelt, 2002). However, in Erika Fischer-Lichte's interpretation, theatre also supports experimentation and examination of the processes and conditions that underlay everyday life (1995: 104). This brings forward the notion of theatre as an experimental field, in the best sense as a critical laboratory, which is also the area I



2.11 – Pepa Uberta with props and moving image projection by Lilia Strojec in *reverberating interferences – explorations into thingness*, 2020, image: camera still : Lene Vollhardt.

locate my practice within. When working with practitioners who are educated in dance, they sometimes bring with them expectations of repeating a presentation, which in the beginning contradicted my own understanding of performance as a unique event. Even when re-staged a performance reacts to the specificity of the site and situation. However, these elements occur in the dancer's attitude by their description, with no event being the same because their main access is through their physical affectivity of that specific event. Especially in the last project aiming to avoid much preliminary set-up yet introducing props, we attempted to introduce an interdependence between these two preconceptions of a fixed stage set and a more fluid situation.

In the later extended preface to *Gender Trouble* Butler defines her theory of performativity as fluctuating between a linguistic and a theatrical understanding. The two notions are deeply intertwined as “the speech act as an instance of power invariably draws attention to both its theatrical and linguistic dimensions” (2002: XXV). Butler elaborated this re-definition towards an interrelated understanding between language and the dimensions of the performative when formulating the subtler workings inherently eliciting in, from, and through citationality in performativity in *Bodies that matter* (1993b). It is this understanding of performativity that is picked up by Barad and extended from ‘construction’ towards ‘production’ (2007: 151). Interestingly, there are already markers within this classification of performativity that accredit for a formative definition of agency as a two-folded or mutual ‘working mode’. As performativity provides a ‘constituting force’ for retention and/or mutation of society's normativity it already dismisses the definition of a purely wilful or one-sided capacity to act. Performativity's contribution must be seen as the call for response, always including the possibilities to evoke forms of resistance and resilience. Consequently, performativity must

be acknowledged as effectively active in the manifestation of criteria by which we arrange our relations to non-human others, between culture and nature, etc.

New Materialism's emphasis on the notion of performativity in relation to matter and materialities has especially been pointed out by feminist thinkers (Bennett, Barad). For Peta Hinton, performativity portends that who or what is at the centre is not the organizer but what is organized. In rethinking Haraway's term of *situatedness* (1988) Hinton discovers that the performative aspects of locatability emphasise "the identity of the speaking subject at the same time as [acknowledging] materiality's entangled engagements as suggestive of the complicated production of any identity" (2014: 99). These were aspects that we indeed tried to activate in our performance settings.



2.12 – Selene Travaglia with prop and Paolo Pisarra without in *reverberating interferences – explorations into thingness*, 2020, image: camera still, Lene Vollhardt.

Performativity as a key aspect of intra-action enables to evoke phenomena by granting *exteriority-within* where 'entangled objectivity' is enacted in *agential cuts*. Hence the conclusion that what specifies phenomena for Barad must be described as a situation, rather than an impression (Bryant, 2016: 6-7). In relation to the methodological choice of movement, this is relevant as it is not the body in space but the body's interrelation to the space that unfolds in motion and reveals a meaningful place-situation. Movement, rather than utilising space, time, and form "discloses being's temporal and spatial happening" (Monni, 2008: 2-3). Especially in its improvised forms, dance is the visualization of movement possibilities, an active exploration into creating "an ongoing present from the world of possibilities" (Sheets-Johnstone, 1981: 399). Unfolding the prospects of potentially another move, another thought, another habit.



2.13 - Presentation at the CREAM symposium, Dec. 2017, camera: m.jaeckel.

2.4 Response-ability - de-centre

[...] posthuman philosophy's objectives [...] to include the non-human as active in the creation of knowledge, as well as integral to the construction of worlds. (Latimer and Miele, 2013: 10)

The practitioners' (including the researcher's) embodiment, affectivity, and malleability are important aspects that resonate in the intertwining of intra-action and performativity. To defy a self-justifying position, the interrelation with the non-human, including the human-made technical devices and one's own positioning within an Anthropocene environment has to be accounted for. In fact, the phenomena observed or experimented with will always be informed by the researcher's situatedness and affectivity within, both in an environmental sense and in regards of cultural coinage. By delineating itself as partial, and off centred, the research attempts to defy preconceptions through realizing *being moved to moving*. For practices to decolonise knowledges, this means to step away from a fixed conception of epistemology towards an acknowledgement how forms of violence against others become performatively "sanctioned by institutional arrangements" (Esson *et al.*, 2017: 385). Currently acknowledged epistemes, often established from and consolidating privileged point of views, provide settled notions that need to be questioned for their universalising attitudes. Humanitarian or ethical values need to be reworked in intra-active and inter-species processes in material-discursive and non-discriminating ways.

In many countries a tacit deployment of privilege (Walter and Butler, 2013: 401, 406) based on the experiences, values, culture and perceptions of white conception is the factual status of normalcy. Sara Ahmed writes of this as an atmosphere, which makes "spaces available for some more than others". As a consequence a non-white person has to labour to pass "through whiteness, not by becoming white, but by minimizing the signs of difference" (2014a). Walter Mignolo speaks thus about de-colonizing as a "de-linking from the modern, political episteme". Disobedience against hegemonic structures of knowledge and beliefs of eurocentrism (2011: 50) attempt to decipher and incite a different beginning. Yet, the Bolivian researcher Silvia Rivera Cusicanqui has criticized this approach as enforcing the systemically established "mental structure" (2012: 97) of institutionalised unequal positioning onto indigenous



2.14 - Workshop remainder at *How does the city move you?* with dancer Akil Scafe-Smith, Siobhan Davis Studios, June 2018, image: m.jaeckel.

knowledges. Cusicanqui argues that using indigenous thinking within the institutionalised thought paradigms of western modernist imperialism and hegemony re-establishes colonial practices on these yet unoccupied grounds. This leads to the realisation of the urgent need for Indigenous Peoples to recover their own form of thought as a knowledge system in order to really affect change, rather than to make its insights available through a distorted lens of western Modernity's universalism (Dulfano, 2014). Addressing such 'internal colonization' Cusicanqui demands that there "can be no discourse of decolonization, no theory of decolonization, without a decolonizing practice" (2012: 100). Yet, Ahmed identifies general mechanisms of non-performativity as a "technique for keeping things in place" (2017: 106). This occurs when predominantly western modernist institutions employ notions such as multicultural and diversity within the same hegemony to change "perceptions of whiteness rather than changing the whiteness of organizations" (Ahmed, 2017: 105).

Ahmed's observations underscore how the position of the researcher must be registered as affectable, but also as to take effect. Thus, the researcher's awareness must pay attention of the experience of exteriority-within the situational phenomena, as well as its un-learning of western metaphysics. This includes being aware that this situatedness still implies in- and exclusions of existent perspectives that occlude possibilities of 'others'. The demand therefore asks for opening the researcher's position to the ethics of response rather than to aim to be relieved from "feelings of guilt or complicity, without having to change their privileged position at all" (Esson *et al.*, 2017: 385). Interestingly, many of the self-experiment exercises I chose guided me on a territory of extraordinary inclusiveness. While Parkour/ADD has non-competition and acceptance in its philosophy, these aspects are also prevalent among many dance forms. As a general precarious form of life (Martin, 2015) dance has the impetus to make something out of nothing, Parkour/ADD is open to people of many abilities. While this pertains to the more open formats,



2.15 - Session with Stephane Vigroux at *Rendezvous VIII*, Parkour Generations, Wembley Park, August 2018, image: m.jaekel.



2.16 – Differently abled multi-disciplinary performer Claire Cunningham in *Beyond the Breakwater*, 2017, © Photo by: Paul Blakemore courtesy of Situations.

the professional scene and standardised dance forms are certainly much more traditionally organised in this regard.

Movement as method has been chosen due to its specific relation to space and time, whereby spatial-temporal dimensions are engendered in motion rather than providing an a priori “frame”. As such, it provides the basis for our “abilities to engage with the world on the fly” (Bresnahan, 2014: 87). The philosopher Shaun Gallagher specifies the insight of renowned dancer Siobhan Davis that movement means learning, by explaining that a “change in the way the brain, body, and environment are related will change cognition.” For Gallagher, whose research areas include phenomenology and the cognitive sciences, and here especially topics related to embodiment, self, agency and intersubjectivity, a living organism is always related within an environment in “some kind of causal coupling.” (2017: 10). A point this project considers taking up by exploring different forms based on constrained or enabled abilities and possibilities, which define the specific ways of intra-action and response-ability. The notion of response-ability throughout the project is expressed by to *be moved to moving*, as becoming aware of the call of matter. “[T]o respond and be responsible is part of what is” (Barad, 2007: 182) entails the realisation that contributions respond in the specific way they come to matter(ing) and creates meaning at this very point of *spacetime mattering*.

2.5 Agency as doing-being intra-activity

Tracing intra-actions and other modes of entanglement between substances and systems enables political critique and the development of ethical and political modes that do not separate the human from the material world. (Alaimo, 2014: 15)

The understanding of self as performative, as referenced in Barad’s notion of intra-action, proposes a dynamical agential process, which re-defines subjectivity as an iterative process of self-other co-constitution. This recalls Julia Kristeva’s *subject in/on process* and her expression of poetic subversion. Yet, as Butler has pointed out (2002: 122) Kristeva’s attempt to destabilise the culture/nature binary relies on the very structures she tries to subvert, due to her strict naturalization of the female to the maternal. However, Evelien Geerts argues that a diffracted reading of Kristeva with Irigaray allows to understand Kristeva’s conceptual framework in a “strategically subversive feminist way” (2011: 20) by redirecting the work to interpretations that lay beyond the ‘maternal’ (Campbell, 2013). Subversions that act from

within a system, commonly rely on differentiating movements, slight turns or twists, a minimal change in rhythm that introduces unexpected mutations. Elizabeth Grosz discerns that in the process of differentiation, movement's "ever-oscillating frequencies or differences" distinguish objects from another (2011: 1) and therefore also function in parallel in the constitution of subjectivity" (2004: 194).

Newer developments in the philosophy of mind, such as promoted by Andy Clark (2008) regard the mind as a perceptive organ extended beyond the human figure. Referred to as extended mind theory, it considers not just the brain and the neural system involved in perceptual processes, but the intra-actions by which actions, and accompanying thought processes, are



2.17 – Giulia Iurza, Selene Travaglia, and Paolo Pissarra interacting by reacting on attached sound device in front of the interactive moving image projection *Untitled_1* by Lilia Strojec in *reverberating interferences – explorations into thingness*, 2020, image: camera still: Lene Vollhardt.

established in including the body and surrounding components of the environment. These insights allow Bresnahan to construe the mover's "thinking-while-doing" in improvisational dance as a type of "embodied and extended agency" (2014: 85). As Maxine Sheets-Johnstone specifies that it "does not mean that the dancer is thinking by means of movement or that her/his thoughts are being transcribed into movement". The relation of thinking with or in movement is rather that "thinking itself [is] kinetic" (2011: 421). In Sheets-Johnstone's account, embodiment is kinesthetically defined through movement experiences as "the generative source of concepts of agentivity" that comprises a complex of dynamic qualities (2009: 57).

Shaun Gallagher defines "agentive action" as being equally constrained and enabled by various factors, which include sensory-motor mechanism, affect, emotion and mood, etc. (2017: 11). Perception, as thus cognition, then cannot be described as induced by "simulative processes," but rather involves "dynamical processes at a subpersonal, sensory-motor level" that engage or respond enactively with the whole organism "living in and materially engaging with structured environments." (2017: 19). Gallagher's interpretation, which comes to the conclusion that, "an intervention that changes the causal relations in a dynamical system will also change the system as a whole" (2017: 9), recalls Oyama's developmental systems theory.

These are further reminders of an understanding of intra-action as a *sympoetic* (as making-with; Haraway, 2016: 33, 58) togetherness, that not only entails thinking/moving in alliance, but also agency as a mutually affective doing-being. Gallagher in referencing Merleau-Ponty's usage of gestalt as 'form' or 'structure' concludes, that "[i]n a dynamical gestalt composed of processes that unfold over time, and characterized by recursive reciprocal causality relations, changes in any processual part (above a certain threshold) will lead to changes in the whole, and changes in the whole will imply changes in the processual parts." (2017: 9). The entanglement between perception and cognition has been summarised as 4E cognition according to nuances by which experience as embodied, embedded, enacted and extended is created in own actions (Rowlands, 2010). Despite these insights, 4E also has been criticised that it has not made enough empirically supported evidence available (Carney, 2020).

However, addressing the 'self' not as excluded but as part of the process of becoming – ours and that of others - in a critical and creative way paves the path for a material, trans-corporeal ethics (Braidotti, 2013: 12). Alaimo and Hekman therefore suggest to turn "from disembodied values and ideals of



2.18 - Session with Stephane Vigroux at *Rendezvous VIII*, Parkour Generations, Wembley Park, August 2018, image: m.jaeckel.

bounded individuals toward an attention to situated, evolving practices that have far-reaching and often unforeseen consequences for multiple peoples, species, and ecologies" (2008: 253). Movement as a practice and method dives into these entangled experiences. While being confronted by the constraints of bodily and other matter, movement also enables experiences of forces and hindrances as providing and unfolding possibilities. This may be most obvious in Parkour actions engaging with the environment, however we tried to make these experiences audible in the project's performances by way of interfering with noisy 'vibes'.⁶

⁶ In fact quite literally relating to electromagnetic waves in the first performance, and light and sound waves in the second filmed event.

2.6 Situatedness

[T]he knower is not the human subject, but the way relations open themselves toward systems of subjectification. (Manning, 2016: 30)

Corporeal subjectivity has been established by Raia Prokhovnik in her book *Rational women* (2002) as attempting to resolve the dichotomy between body and mind through an undoing of gender. Her argument develops subjectivity as a mind-body relation influenced by corporeality. Defining subjectivity as being primarily related to the corporeal (2002: 11) demands for sex/gender distinctions within a “concept grounded in a non-dichotomous notion of ‘human’ corporeality” (Pedwell, 2007: 33). Prokhovnik discerns that “the integral interdependence of mind, body and emotion within all persons”, through interdependent interaction “with others, is recognized in particular persons in the form of differences” (2002: 190). Despite this opening towards differences her focus on the human and human subjectivity remains close to traditional definitions of agency.

I would like to revisit agency’s oscillating between an all-defining subject position and the dichotomous rendering of self into an object that I identify in western modernist thought patterns. In this definition, when pushed onto object side the western modernist subject then is regarded as stripped of that very position and its implemented responsibility. This wants to point out that despite the common assignment to any other side/subject/matter as non-influential, and thus subdue to enforced agency that in current redefinitions only a spectrum of dichotomous alternatives is activated in its turning or undoing when relating to the former agential human. Therefore, enacting a flattening of disproportional shares in capacity. The problem will be reviewed in chapter five by attempting to overcome the juxtaposition of flattening through the analogy of the ‘afterimage’. Generally, none of the core features, like performativity and intra-action, can be construed as a sole feature, causing Braidotti to suggest subjectivities as transversally composed. Re-defined as an expanded self, subjectivity in her view is a “relational capacity [that] is not confined within the human species, but includes non-anthropomorphic elements (2018: 12). Considerations in this regard not only tried to give space to objects to unfold, but also to detach camera views from a human-directed perspective.

Defining agency as doing-being, after Barad, as a field of being and co-evolution (or co-constitution), defies the western modernist imperative of doing that ignores reverberating resonances. Advanced capitalism's focus on immediate consumerism enacts a dismissal of care which the act of listening entails. By failing or neglecting to hear any co-vibrating resonances, the field of response-ability that establishes subjectivity is narrowed into 'doing'. Experimenting with agency as a doing-being within the field of response-ability establishes subjectivity within this project by engaging with the entailed ambivalence. Our performative



2.19 - Versions of situatedness - plastic bag, plants (human photography) Margate, August 2018, image: m.jaeckel.



2.20- Versions of situatedness – human, metal pole (GoPro Shot); Wembley Park, August 2018, image: GoPro (m.jaeckel).

experiments encourage to open up, to listen to the around that is co-constituted and co-constrained through engaging. While we talk about listening, it stands for a general increased awareness that experience offers when approached through relationality. That can be experienced within the self, regarding the body, but equally towards the wider entanglement with other humans and non-humans.

The body is an ecology of and for the self, from where we meet and respond to others (also when interconnected (extended) by technical devices). Bodily motions, vital ones as blood flow, bacteria settlements and synaptic bridging, as well as affective ones like jumping and dance, contribute to the situations that define our partial views of situatedness (Haraway, 1988). As equally providing constraints and possibilities that define position within the wider system, these interconnections need to be considered when addressing and potentially shifting habitual behaviour (in moving and thinking). Realising the delicate co-evolution of mind-body and environment (Clark and Webb, 2015) also demands to recognise the loop of human and non-human's inter-related capacities. The abilities and the manner by which we navigate and are navigated by our surroundings, is structured by our interference - thus informing our thought patterns. In fact, for the performances the wave form of noise and sound was taken in a literal way to make interferences perceivable. This action not only

refers to the incitement of listening and awareness, it also draws a connection to Barad's Quantum Field Theory based on the particle/wave complementarity in the two-slit experiment (2007; 2017).

While Grosz referred to the differentiating aspects of movement Brian Massumi emphasises the potential variance in the body's "immediate, unfolding relation" (2002: 4). Alva Noë, when looking at dance, discerns the environment as a world of "opportunities, as well as the obstacles and limitations" (2008: 125 -126). Within this project, the activation of the multiplicities movement comprises an intertwinement of sensual experiences and affected sensuality of embodiment emanating as an undividable, though paradoxically differentiating experience of possibilities. Therefore inciting "the constitutive presence of otherness within and all around the self" (Braidotti, 2014: 165) clearly undoes subjectivity as autonomously gained and delivering unitary visions.

2.7 Perspective / queer strategies / diffracting structures

Writing is living intensively and inhabiting language as a site of multiple others within what we call, out of habit and intellectual laziness, 'the self'. (Braidotti, 2014: 164)

Braidotti considers the performative contribution of language as not just "an instrument of communication, but rather an ontological site of constitution of our shared humanity." Suggesting that "[w]e are spoken by language, written by it" (2014: 164), that is, embedded and enacted performatively, thus extending the subject's intra-active becoming. The research made from partial perspectives becomes, within a specific meaning (mattering), situationally constituted only in entanglement. Such a nomadic approach regards the writer's language as able to transport the feeling of being inhabited by "an 'other within'" (2014: 166). This affective approach to writing, that includes other matter(ing)s as intransitively affective and constitutive (2014: 163) is a reminder of its belonging to the tacit powers of processes of knowing (Polyani). It can lead to amalgamates that so far have not been allowed to be thought of together as a "discontinuity that queers our presumptions of continuity [which] cannot be the opposite of the continuous, nor continuous with it" (Barad, 2007: 182). This may be a way to account and expose "the nexus of power and meaning, power and discourse of which it is composed" as part of an ethical responsibility that includes the acknowledgement of a text's importance and relationship to others (Braidotti, 2014: 165).

Texts thus can become untimely anchors for thinking and re-turns, by installing intercepting temporalities, whose renewed appearances contribute to different comings to meaning, as *spacetime mattering* (Barad, 2007: 180). While the literal same never can be revisited, such *re-turnings* (Whatmore, 2006) may induce a slightly different appeal that shifts meaning. Being noted without immediate classification these provide an invitation for the acceptance of diversity, and towards what is not always legible, to initiate a “process of opening oneself up to the otherness that is the world itself [...] that makes us unrecognisable” (Grosz, 2011: 87). Realising the multidirectional futures and pasts (Rothberg, 2009), that are omitted by time as a linear thread allows to perceive western Modernity as a construct (see chapter five). It must thus be reminded that interpretations of reading (Barthes) and the ambiguity of signification (Kristeva), define the contextualization of research within the discourse of a certain time and consciousness (Fleck *et al.*, no date: 534, 284). Returning to Barad’s concept of the interplay of *spacetime mattering*⁷ allows to realise a becoming “distilled from the past and used to imagine a future” (Muñoz, 2009: 1).

As Deleuze and Guattari described the movement of ‘being between’, as the never ceasing effort to become, marks the “only way to get outside the dualisms” (1987: 277). As iterative being, the subject’s becoming in continual difference implies as suggested earlier an interplay of complexities “that expresses the principle of not-One”. Thinking from the other, hence towards the subject, offers an entirely different perspective (Castro, 2014). Connotating the subject with the other includes ‘othered’ humans, non-humans and matter as threaded through us (Barad) by the globally interconnected cultural system of colonizing capitalism (Demos, 2015; Kirby, 2017: 2-3; Wark, 2015). Tracing these routes brings the considered subject-self back in relation with matter (e.g. Nixon, Parikka), and as such with human and non-human others.

In perspectivism form matters but is mutable and rather defined by features. Transferred onto this practice-oriented project, this defines encounters on various levels as creating intra-active thing relations that contribute to making meaning. While the emphasis on reading/writing specifics certainly relates to the thesis, I regard the same even more relevant for the documentation(s) of the practice-based performative part of the project. Artistic

⁷ In Barad’s, in intra-action an agential cut allows for an exteriority, though always within phenomena or apparatus, iteratively accompanied and followed by other ‘agential cuts’ as a coming to meaning - a specific *spacetime mattering*.

performance poses several difficulties in documenting, and this relates to its entangled situatedness that provides various perspectives for any audience member. Along with a perspective film documentation that included body cams carried by performers, and an essayistic film experiment including various viewpoints, I



2.21 – things and shitake mushrooms with attached sound device in *reverberating interferences – explorations into thingness*, 2020, image: camera still: Lene Vollhardt.

further decided to also provide material via a text-object. Conceived as a remainder from the performative process, the publication supplements my writings with material from contributors and co-workers, including poems, performative-writing, and comments, as well as drawings that delineate the contours of other forms of gestures within this project. The concept reflects Barthes statement that interdisciplinary studies should create an “object, which belongs to no one (1986: 72). Alongside the filmic works, this ‘object’ intra-acts as remainder of the performative research, but in acting for others, it also establishes an object of artistic research.

2.8 Experience / soma / sensory

New modes of experience are created from the perspective of the event itself. (Manning, 2016: 34)

Research is “a study, a practice, a speculation”, an activation of something already latent by a *minor gesture* (Manning, 2016: 13, 7). Emerging from performative presentations as a becoming from and with the practitioners and the researcher’s intra-actions, the publication, as the thesis, are instantiations on different levels as ways of knowledge production. Established from interferences, including those between practice and theory, research takes different perspectives. Following this, minor tendencies that are often less appreciated compared to “the form knowledge takes” (Manning, 2016: X), these spark an invitation to the possibility of other perspectives. The practical and theoretical parts of the project draw upon the same concept, yet they constitute different ‘objects’ and *spacetime-matterings*. The practice of theory, as well as the reflective routine of practice, exist in complementarity, where each part manifests its own temporality and creates as well as initiates its own on performativity.

Study in the performative field is always challenging and unpredictable. Exposing myself to a wide range of experiences, including a workshop at Siobhan Davis Studios, playground sessions at Rambert, or the experiment of taking part in the yearly meeting of Parkour Generations, all this was part of my outlined method. Physical experience cannot solely be studied without engaging in it, yet they also cannot be delineated as they are threaded through my body, memorized by temporarily sore muscles, inscribed by the surprise of learning a new quick turn, the embrace of a community experience or a never before experienced alertness. None of this can be proven, but as Fred Moten states:

“[S]tudy is what you do with other people. It’s talking and walking around with other people, working, dancing, suffering, some irreducible convergence of all three, held under the name of speculative practice. The notion of a rehearsal – being in a kind of workshop, playing in a band, in a jam session, or old men sitting on a porch, or people working together in a factory – there are these various modes of activity. The point of calling it ‘study’ is to mark that the incessant and irreversible intellectuality of these activities was already here. [...] To do these things is to be involved in a kind of common intellectual practice. [...] that recognition allows you to access a whole, varied, alternative history of thought.” (Moten in Shukaitis, 2012).

In this regard, my research practice rather resembles an assemblage technique, a sort of *agencement* for learning to unlearn practices for a change in doing-being. As concerned with the idea how new or changed knowledge can be assembled, I did not so much document each step in an analytic scientific way, but



2.22 – Annette Arlander, *Hanging in a pine tree or appearing with plants*, 2019, image: A. Arlander.

rather ask what can be derived from it. What and how these experiences of acting, reading and writing express themselves in the modes of performance production? Can I transpose what I assume to gain back to my co-producers, as well as to an audience? Thus I did not assume to reach an end-product, nor to trace the route in each detail, as recall I am just one of many, but rather question if there a progress in the direction I hoped for. I refer here to the more recent work by Annette Arlander, as her research, though not directly movement (in the sense of dance) related seems similarly related with the concern of the translatability of experimental experience. Such work still accumulates according to a sense of the performative that *something out of nothing*. How can this contribute to new ways of

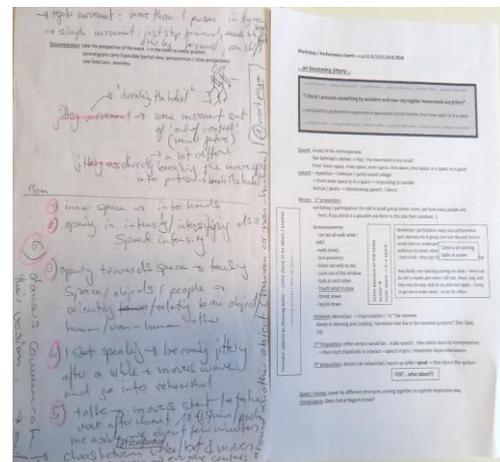
knowledge production? For Arlander a partaking in “mutual transcorporeality” should not be assessed by dichotomous hierarchies as this references the common versions of “exclusions and inclusions [...] constantly taking place in practice (2019: 469).

Performance experiments are then indeed ‘in progress presentations’, that probe for different ways of access to perform and make experienceable the iterative element in worlding. Referencing the chosen theoretical frame, practice produces feedback, while in re-searching constraints as well as possibilities evolve. The experimental stagings act as seismographic directives for the continuation of the research. How do ideas translate for the participants, what speaks or not to an audience, what is returned, which constraints are active in space, how to react when unlikely pathways open? What occurs in the paradoxical possibility of connectivity, as a leap that opened a literal *cutting apart/together*?



2.23 – Performance in progress; growing mushrooms and preparations with electronic devices in my room for *reverberating interferences – explorations into thingness*, 2020, image: m.jaeckel.

The notion of intra-action is attempted to be performed, to become perceivable in the interaction of dancers or movers. How to avoid that transference to embodiment shifts into mimicking? Comparable to the isolated rationality of the brain, dance in its aesthetics is often regarded as an idle creation of form, thus commonly not considered a site of knowledge production. Therefore, my interest developed also for other forms of movement, and their specific affectivity, with roots in the everyday or street culture. Providing a contextualising (situational) perspective for the moving walker, the running child, or the energetic dancer, it becomes more likely to be considered to convey embodied knowledge. This ‘hidden (or tacit) language’ that appears is considered as being confronted with an unfamiliar set of ‘sign language’. A situation about which Matthew Bremner writes, “our daily interactions are eased by a stream of invisible

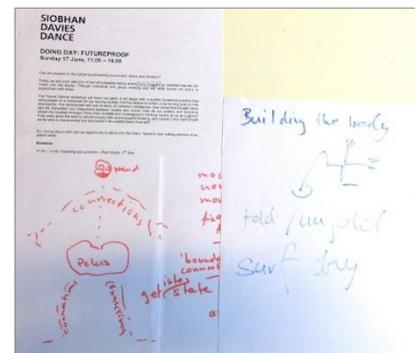


2.24 - Various notes and sketches from sessions for the development of a score for *signalling - at the molecular level*, summer 2018, m.jaeckel

signals – a kind of silent language we all understand, which you don't even notice until it's absent." (2018).⁸

Ensuing from the insight that embodied knowledge is undervalued, but foundational to our being in the world, the performance experiments employed a word, or task to potentially break embodied routines on which moves are based. Chapter three dives into the practical research in Parkour experiences and its relation to potentially breaking habits. From thereon the process entailed the transformation and intertwining of several threads that include movement as interference, but also as responsive act towards the environmental. In the first performance piece we used amplified cloth pieces to make these ideas experiential for the movers and perceptible for the audience. The project, *signalling - at a molecular level*, attempts to think and play through the smallest common denominator and is described in detail in chapter four. A second performative idea invested into listening and possible routes of decentring, was later re-conceptualised as an experimental film project due to the limitations in place by the current Corona Virus crisis. Chapter five provides the essential thought movements leading up to this experiment, *reverberating interferences - explorations into thingness*.

Fieldwork: A moment while observing dance established a certain questioning: What is it, why does it fascinate me? Having until this point no formal dance training gaining experience was deemed essential and initiated by visiting workshops. Attempts to decipher intra-actions with the environment in watching dance, and in encounters with movers, thus became then both a pathway and this project. For this research, to maintain a physical health, to take my mind for a walk, to get sweaty in yoga, to take an unusual step in a dance lesson, to make (at least for me) a daring jump in a Parkour session is assumed relevant. In affecting my mind and thus my thinking these activities influenced the result. In the following some of these are listed:



2.25 - Notes from a 'Doing Day' at Siobhan Davis Studios, Lucy Suggate workshop, June 2018, image: m.jaeckel

⁸ Based also on own experience throughout lengthy stays in different cultural circles (south east Asia). Possibly also Covid provided an experience of that.

Researcher as laboratory: experiments in movement, recording notes, transcribing and keeping a work diary together with drawings, shooting short movies.

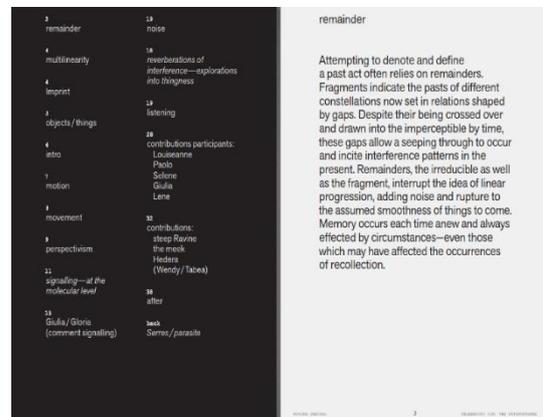
Locations & people: AQ Arts Dance sessions, Wembley Park; Esprit Concrete ADD/Parkour, London; Rambert Playground, London; Parkour Generations, London; workshops at Siobhan Davies Studios, London; Tanzfabrik, Berlin; Joint Adventures, Munich; Fighting Monkey, Prague; diverse Yoga studios and teachers.



2.26 – At *The Playground* at Rambert Studios, among the dancers: Giulia Iurza and Tom Wohlfahrt, 2017, image: Elena Fortin.

Performative resonance: performative stagings (lectures; workshop), co-operation and collaborations for performative presentations (2019; 2020/2021).

Documentation: To document performative events in the arts is both crucial and problematic. Thus, the decision has been made for a publication as remainder considered a collector of marks of the process, and a multilateral ‘memory holder’. The publication as documentary remainder incites to be a thing, occupying several meanings: aside of providing a trace, or left-over materiality, it acts as document that when picked up engages performatively in its own diffracting way through the before mentioned untimeliness. Conceived as a multivocal chorus of contributions include those by co-operators, collaborators, participates, and audience members.

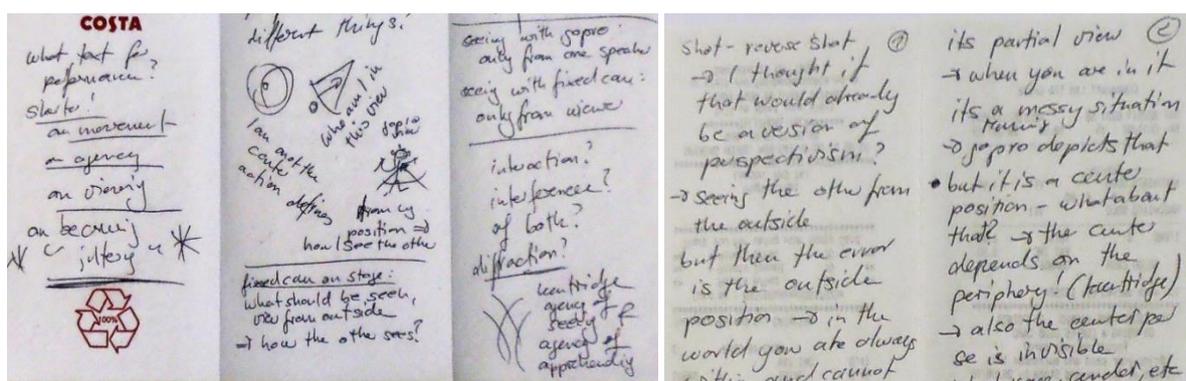


2.27 – Content and page 3 of the publication *unlearning (in) the Anthropocene*, 2021, image: m.jaeckel.

Film documentations: In filming the performances we experimented with different forms of recordings. *signalling - at the molecular level* had a fixed camera in space, as well as hand-held shots, and body cams mounted on some of the performers. A conventional documentation was made of the live performance at the post-industrial space of Ambika P3 which was interlaced with video material from body cams to address the notion of perspectivism. These considerations of ideas regarding de-centring, however, do not

contextualise problematics of technology as human agent centred devices. In the second project, *reverberating interferences - explorations into thingness* we had two moving cameras in space and four GoPro cams located next to 'things'. Attempting to depict different perspectives, cutting angles and interlaced layers within the editing process, the outcome aims towards an experimental film essay that nevertheless is a documentation.

Insights gained in practice: Movement, throughout this project, provides a lens by which to access different ways of being and its congruent knowledge production. To think through motion and in movement is considered a process in which the seemingly separate merges, despite providing distinct impressions. Retrieved from the insight that “[t]here are no brain parts for abstract faculties of the mind [...] that are separate from the brain parts that evolved to mediate between visceral and somatic processes.” (Johnson, 2008: 174; Tucker in Johnson, 2011: 174) the body and the mind are considered in a complementary relation. Yet, there are all types of irregularities, as affectivity for and by movement is different for each body and object. While the title, *being moved to moving* tries to evoke that ‘we’ are rather moved, than sole movers of ourselves, this implies different connotations for other-abled persons (Cunningham, 2018), humans with different capacities (Wilderson) and non-human matterings. This indicates the impact of *being moved to moving* is dependent on situational and material conditions. Movement is affective impulse and response that can take very different forms, such as the signalling molecules passed via fungi onto a wider environment—“In ecology we call those things interactions” (Wohlleben and Simard, 2016).



2.28 Two pages with notes on camera options, de-centering and perspectivism, July 2018, m.jaeckel.

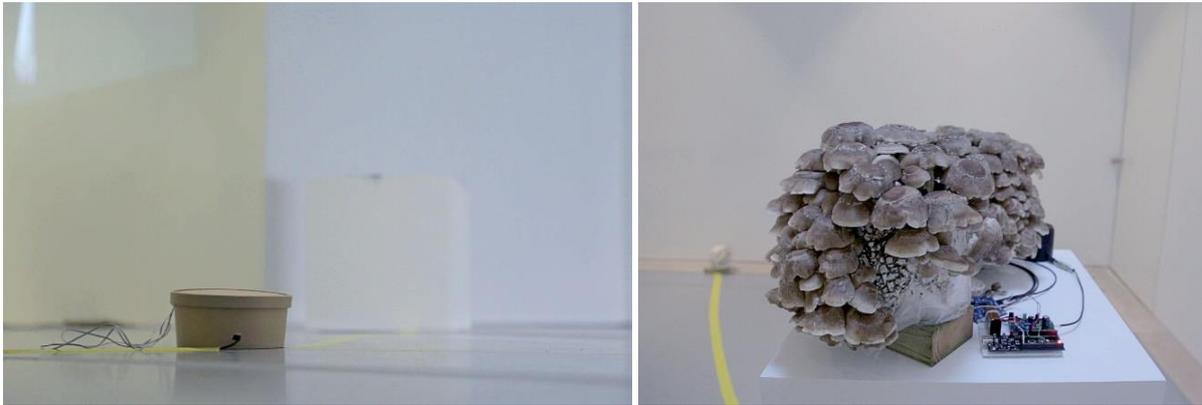
Objectives - how to support the project's intention to de-colonize? The point of departure is my situatedness within the system of thought and habit that contextualises as a universalising force based on western Modernity. What is important, therefore, is to avoid appropriation of other ways of knowing as to further subdue them to the colonising way of

thought. This insight guides my speculation along Barad's theory of Agential Realism – as *exteriority-within* - providing a framework that allows to subvert an exterior position. Choosing motion as a devaluated method within rationalised western Modernity provides the perspective of a deprived way of knowing within this very system.

What is a 'thing'? - the political in lived experience: The philosopher Maria Zamprano combines knowledge production not only as an inquiry in a rational way, but as capacities emerging from lived experience. Constituted experience, then, is always “both one's own and that of another” and therefore, an “experiential, real, felt knowledge of life”, that has political consequences (Gentic, 2015: 426). As not all experience can be represented in language, the binary mode of thinking is destined to fragment “a larger concept of self in community” (2015: 418). Therefore, this denominates objects and others not belonging to the accepted cultural definitions, as savage, exotic, or oriental (Said, 2003). Such reification practices a knowledge of domination (Césaire and Kelley, 2001) based on a paradigm of oppositional thinking that blocks relational modes of interchange. What provoked my experiment of thinking through the afterimage in chapter five, was challenging a thought system that does not assume modes of producing knowledge between cultures, (Quijano, 2007: 174) independent of them being either other human cultures or interdependent systems of non-human matter, as ecological systems. As decolonial studies therefore mostly “search for a means of giving voice to non-rationalistic ways of knowing, [...] in places other than Europe” (Gentic, 2015: 420) this PhD project attempts to tackle this important issue from within the thought system, whose omissions created so many disbalances. In the search for modes of learning to come to know otherwise the project suggests specific ways of experimenting and thinking that enable respective valid knowledges. Western Modernity neither commonly accepts tacit knowledge as an extended experience, nor assumes of oneself as dividual. These coordinates provide a position, rather than speaking about the location of the other (human and non-human) from a distance, one's own entanglement is traced: next to matter, methods matter. Aiming to turn over own systemic limitations by pushing its borders from within, not for appropriation, but to increase osmotic and/or diffractive exchange.

Expected outcome: Integrating modes of knowing from other viewpoints, as through movement, provides an enriching difference when viewed as complementary rather than being defined as external and thus exploited in a (semi)conscious way. Yet, as the

researcher's position marks an ambiguous point in the undoing of systemic notions the research considers the questioning of where / when / and by what (*spacetime mattering*) of the normative, and its unconscious or wilful hegemonic part as essential. Performative experiments with intra-active forms of exchange and encounter are hence considered as conscious statements of worlding eventually enabling a *response/i/able* engagement with the environment and the other at this very moment. Addressing agency based on resonance, that means always as partly evoked, regards contributions therefore as intertwinement to the call for *response/i/ability*.



2.29 – Two film stills from *exploration into thingness*, October 2020, camera: Lene Vollhardt.

The outcome of this artistic research is considered dialogical and performative in its thesis, as well as in its performances. For this reason, also the co-operative and collaborative aspect of production—to consider knowledge as always distributed but diffracted and condensed in intra-action—is essential. Consequently, the research establishes itself as interdisciplinary and composed from partial perspectives. Its specific meaning (*mattering*) is situationally constituted and only emerges in entanglement. The research experiments with the experience for an ethical practice of sensing and responding towards our human and non-human companions.

3. *breakin' habits: in touch, out of bounds*

3.1 Touching down

Leaping entails focusing on finding an area of ground other than the one currently being stood on. The act of jumping, at least for humans and many animals, implicitly evokes the experience of landing. It is an event that brings the reactive, responsive, and reassuring sensation of touch after a momentary departure, from known ground. Each experience needs the other to become palpable in its entire force. The not-being-in-touch with the ground defines the weightless act of flying, while landing communicates solidity (if on solid ground) or demands at least a different form of movement if coming down elsewhere (like in water). In many cases, jumping or leaping further needs the appropriation or conception of a background resonance (here defined as habitual knowledge) allowing to get out of bounds

first to then land somewhere – in another setting. Such embodied or tacit knowing builds on the relentless trial and error efforts similar to those of a toddler learning to walk, or in the case of non-humans, the climbing efforts of newborn kittens. These moving abilities provide the frame for a leap or change in the perception of habit that correspond to E.



3.01 - Climbing efforts by 4-week-old kittens, May 2019, image: m.jaeckel.

Grosz's definition of habit (2013) relying on Felix Ravaissou's re-publication *Of Habit* (2008). Not regarded as a dead-end routine, or the ever-same autopilot drive, "but a disposition, a virtue" (Ravaissou, 2008: 2) of change, habit's underlying structures provide the ground for further possibilities to come.

In the context of this research, the above understanding of habit as an accrued inclination is considered essential in embodiment as accumulated abilities of human and non-human beings. This understanding is brought in correlation with the practice of a growing movement of Parkour¹ and art du déplacement (ADD)², to exemplify the hidden or overlooked knowledge of bodies, that are considered as foundational and influential in terms of knowledge accumulation. The approach brings interpretations of embodiment, affect,

1 Parkour, established in France by David Belle in the 1980s, is a "strict method of training in which practitioners were meant to move from one point to another point quickly and efficiently". Today the term acts as umbrella for practices like *Freerunning* and the *Art du Déplacement* (ADD). (source: <https://www.parkourways.com/history> [accessed: 20.08.2020]).

2 *Art du déplacement* founded by the *Yamakasi* group is defined as "a discipline, a lifestyle, and a philosophy to live by. It is about strength both in the mind and the body... about the spirit of helping others through every day pain and struggles and never giving up. It is a way to truly discover yourself, and to use that knowledge of yourself to improve and to help others" (source: <https://www.parkourways.com/history> [accessed: 20.08.2020]).

performativity within the framing experience of situatedness into an experimental dialogue by diffractively interweaving theories and physical self-experience. In this sense, the project performatively accesses contemporary positions of specific interest, as provided by Karen Barad's notion of intra-action, that is characterised through an awareness of in-and exclusions. Of further importance is Sara Ahmed's term of *orientation* understood as defining a perspective (2006, 2014b) and Mark Rowlands' insights into the *extended mind* (2010) exceeding common understandings of perception as solely cerebral. My diffractive reading stays close to Barad's interpretation in relation to physics and touch (2012a), and her distinct pointing towards the specific adventure enabled by staying "in touch with the material-affective dimensions of doing and engaging science" (2012a: 208). Her instigation to stay in touch is crucial for providing a basis to go out the bounds of defined presets.

To stay in touch in today's daily life commonly applies devices that connect by diverting haptic experiences. Touching screens assumes that humans are able to perform themselves in the dimensions of virtual spaces. Such exceeding the bounds of bodily abilities, yet often comes at the expense of affective experiences that direct touching entails. The implementation of technological devices often ignores and dismisses the importance of a certain friction and resistance within the action. Through features of seamlessness implementing an almost complete take-over of 'guidance' by a range of devices and their appropriate transmitting background materials (GPS, cloud, VR, etc.) connections to physical measures are lost. The exclusion of embodied experience, as a deeply settled attitude of the Cartesian view, blurs this disregard promoting a neglect of the technological intertwinement. Such entanglement though becomes obvious when accessed through McLuhan's perspective as bodily extensions or if understood as internalized tools similar to language, as described in the work of Luria & Vygotsky (Rowlands, 2010: 15). Yet, while both frameworks provide an understanding for the blurring of the body-mind periphery their interpretation of agency still entails a binary distinction thus genuinely fostering the ignorance for an intertwinement with the technological matrix. While aware of technologies' essential matrix of contemporary life, this PhD project focuses on the analogue realms of movement. The fact that these technologies reshape our physical experience demands a re-evaluation of the dismissed interrelation between tactile physicality and knowledge production.

Taking the example of a Parkour practitioner taking a jump this chapter addresses implications and possibilities arguing that physical action and thought essentially touch upon each other. As a profound



3.02 - Still from *Motus*. 2011, camera: N.Bluff.

worldly intra-activity the basic move of ‘jumping’ provides essential information that might be applicable to break with or change prevalent habits. The essential follow-up after initiating a leap (whether by a human or non-human jumper) is a sequence of moves (or crumbles)³ that finally arrive at touching down at the ground or some other matter. Especially in Parkour, ADD and some forms of Street Dance, these touch-down events are used to propel the momentum into the next move. Touch thus, not only shifts the boundaries defining the arrival’s *fragile presence*, but is also what enables further departure, in acknowledging the resonance from the ground or any other object of contact. Due to its immanent reciprocity, the affective sensation of *touch* and being *touched* (by the ground in landing), not only reassures about being in the world, but conversely reaffirms the world around.

3.2 Getting (something) out of the situation

Parkour’s philosophy defines itself as the art to find a trace or path aside of predesignated ones. An obvious interpretation of such understanding emerges by literally rendering the expression *to be in touch* (with ability and environment), *while out of bounds* (of common modes). Yet, for a practitioner “going out of bounds” means that her moves are distinctly based on trained and implicit knowledge. In this sense Parkour/ADD exemplifies the notion of habit “as having knowledge and using it to produce something” (Grosz, 2013: 219–220) basically out of nothing. Furthermore, this is done on the background of explicitly looking for non-predefined possibilities. Such view allows drawing upon the inference that a jump fosters a certain opening in habit (each jump lands differently), while being in touch (with tacit knowledge) provides the necessary basis supporting the discovery of palpable new or different experiences. Habit, in this context, allows a reaction within the environment that is not reduced into an unquestioned routine. Contrary to the common view of habit as

³ In Parkour analysing a jump is called ‘breaking the jump’. ‘Crumbles’, as used by Esprit Concrete coaches Kasturi Torchia and Yao Gogoly, thus define the single ‘broken parts’ (session: 20.01.20).

limitation, a routine in Parkour/ADD (and also in certain contemporary dance forms) entails the possibility eliciting new or different moves: a set of background practices that enables a creative capacity of different responsiveness.

Albeit, contemplating here about the opening up throughout a jump, this does not imply that the practitioner drops all intention. For the athlete and ADD coach Georgia Munroe, both is crucial, staying in contact with her abilities, and gaining a feeling for the immediate environment. Thus, these trained abilities cannot be understood as static mechanisms, but must be considered as potentially creating stability, while granting possibilities.⁴



3.03 - Georgia Munroe rehearses throughout Kasturi Torchia's talk at the symposium panel *response/i/ability*, Ambika P3, March 2019, camera: Lene Vollhardt.

For the philosopher Alva Noë what commonly is understood as habitual knowledge defines concepts that “are techniques by which we take hold and secure access”.

These skills provide a certain practice that allow “what might otherwise be unseen come into view” (2015b: 13). However, definitions of what counts as meaningful statements within the field of accessible possibilities can also block access to “mere marks” (2015b: 8,13) as yet to be deciphered occurrences in an uninvoked state of latency. As the Parkour practitioner and film maker Nicholas Bluff stated: “[Parkour training] made my thinking more creative [...]. Instead of “Oh, I can't do this”, I am trying to find a solution to get something out of the situation” (2013). Yet, these options or possibilities, as occurring in Parkour to cross a distance from A to B in a different way, are constantly changing. Rather than a once and for all solution how to traverse a certain distance, multiple ways become apparent. In fact, what is offered is a field vibrant of potentialities proffering a dynamic and contingent multiplicity (Barad, 2003: 819; Whitehead, 1978: 45). Choosing one path over another includes the anticipation of possible in- or exclusions. “To get something out of the situation” requires

4 Grosz. 2013, p. 219 – 220. “... Ravaissou elaborates a profound contestation of philosophical mechanism, and the assumption that habit is an inauthentic expression (of self, of ethics, of freedom). Part of a lineage reaching all the way from Aristotle's transformation of the Platonic opposition between the Forms and material existence, and particularly from his distinction between potentiality and actuality, between having knowledge (hexis, 'having', 'potential', the term from which habitus, 'habit', is derived) and using it to produce something, *energeia*, that makes a good life; ... “.

from the practitioner when running up against a wall to appreciate more than one existing option of how to trail a line. Such responsiveness that finds various versions for jumping or bouncing, rather is retorted through the environment by becoming a spatial situation of different possibilities.

An illuminating advice for beginning jumpers in Parkour or ADD practitioners is Dan Edward's (Parkour Generations, London) comment to "stick to one's mistakes".⁵ This proposal serves as a reminder that, once

off into a leap with a slight misconception or from the wrong foot, one has to follow it through from that imperfect beginning. Pretending to have gotten it right provokes the potential disaster of falling badly. It implies not just, that failing per se cannot always be avoided, which is already a lesson to learn, but in any specific situation it is crucial to act according to one's specific response-ability for and in that moment. This reminder to work with and along constraints not only by the environment, but also those of the body and own convictions, becomes an effective tool to eventually induce some change. However this should not be misunderstood as implying an interpretation of 'assimilation', but rather hint at constrains and possibilities in adaptation. Assessing the situation for the where and how of landing needs to factor in the getting into a jump that not only is influenced by negotiating the practitioner's condition, but also the relation to and with the environment. Thus, the term response-ability accounts for both sides. Traversing space differently allows gaining new perspectives, new insights – a different knowledge.

3.3 Adaptation – following the line differently

The following of a line from A to B defined by own propositions, places the Parkour practitioner's experience in opposition to the pre-designed choreographic routes of city layouts. The design induced systems of cityscapes that other certain non-humans, especially most animals, is countered by Parkour and ADD practitioners. Reinventing routes according to momentary, non-planned needs underscores the refusal to accept a certain perspective in



3.04 - Louiseanne Wong jumps against the wall in *signalling – at the molecular level*, Ambika P3, March 2019, camera: Lene Vollhardt.

⁵ Comment during the yearly 'Rendezvous' gathering of Parkour Generations London in August 2018.

terms of social situatedness. And with that certain assumptions in human made planning and order that provoke a non-performativity, that for Sara Ahmed is conveyed in the assumption “it is like that”. A viewpoint, common in the context of diversity issues within



3.05 - Parkour Generations London, *Rendezvous 2018*, image: m.jaeckel.

institutions, that establishes a *disciplinary fatalism* (Ahmed, 2014b), where following a pre-given line without allowing deviation or change is considered the only option. To perceive the situation from a different perspective then becomes defined as a problem that requests adjustment that has to give up concepts of inhabiting or occupying space differently (2014b). Adaptation then becomes the only choice for othered humans or non-humans, as participants that are deprived of the ability of expressing meaningful (re)actions of mutual affectivity.

Systems (of thought and living) that are based on selective modes of in- or exclusion diminish the possibility to consider mutual affectivity. This disregard of effects in combination with an generational amnesia (Kahn, 2011: 163–183) that is fostered by adjustment to incremental changes as progress implements a worldview where never any *response/i/ability* must be heeded. Based on a western modernist perspective the agent considers all action as contribution of their side, while dismissing any response and denying any reverberating effects. A similar interpretation can be drawn from Rowlands description of the impact of instantiated representation, which even when the *primal sketch* incites a different claim about the way the world is, insists that “the world *should* be that way” (2010: 29, original emphasis). Sara Ahmed describes such pre-conceptions or habitual thought images as quasi qualities which become tangible and almost real aspects of a thing or body. Communicated (Ahmed, 2014b) as a common understanding of habitual structuring these sketched ‘perceptions’ attaining according re/actions.

Ravaisson’s rather paradoxical concept of habitual knowledge is founded on the account of habit’s relation as background-oriented ability, which enables an active spinning-off into a re/action on a received impulse from the surrounding world. This effect occurs after tendentious re-occurrences have shifted that (re)action into the background. As potential

'short cut', these tendencies provide the backdrop for future events fostering immediate (new) possibilities. For Ravaisson in the fading of *effort* in movement "action becomes freer and swifter, [and] itself [...] more of a tendency" (2008: 51). Training in Parkour and ADD focuses on fluidly moving through the found environment thereby adapting to obstacles, thus changing the approach in acting and thinking. Commonly registered as a biological or evolutionary process effective across various species adaptation by itself "refers to an organism's adjustment to its environment and makes no normative claim" (Kahn, 2011: 189). Adaptation in western Modernity often only is registered in retrospect then mostly recognised as an advancing process barely considering the vanishing or destruction throughout its course. In Parkour and ADD adaptation is an important concept that entails a possible critical and subversive potential in its relational understanding of mutuality. Next to fostering self-experience of adapting to the momentary situation, the sport thrives within the most brutal of concrete architecture bringing forward exchange and engagement within isolating and divested areas as a creative activity 'out of nothing'. Nevertheless, due to the fact that the environment influences our way of being/thinking (Bijnens *et al.*, 2020), Parkour/ADD's direct engagement with these cityscapes may also increase the acceptance for such constructions adverse to most living forms. Originally it was not the practitioner who modified the environment to her needs. However, while today Parkour trails are built accordingly, the initial idea that the actant adjusts to the surroundings rather than vice versa, is still embraced. Parkour's counterintuitive strength is the creation of a strong reminder that the pre-given line of "it is like that" may block off important experiences, insights, and options to approach something seemingly given in a different way.

Generally, adaptation happens inconspicuously as a constant developmental process that is multilateral and iteratively interfering. Its slow change acknowledges that what is regarded as 'other' or external influence needs to be listened to. Never just gain or loss, adaptation's subconscious affirmation contradicts the western modernist understanding of its sole agency. It is errant to assume a response can be avoided by exclusion and neglect. Whatever one declares as of different nature or culture and thus as not belonging and insignificant, still responds in its limited, mutated, and redirected ways. Exclusion, ignorance, neglect, these are all part of Barad's interpretation of agency as an *intra-active doing-being* (2007) responded to by improvement, decline, as well as the many areas in the in between, in mutual exchange. Agency is something that is never done alone or solely by what humans call

'will'. Neither does a one-sided interpretation elevate a self-declared actant above any response/ibility, nor does the insight of situatedness subvert adjustable response-ability. Following Ravaisson, ease cannot be accounted as the sole initiator towards a different habitual form, rather it is important to realise adaptation as a process of loss and gain. In Parkour or ADD adaptation indicates acknowledging the friction with/in the environment to move smoothly. As in any form of knowledge production, thus connections that open up or are 'freed' when different routes of action for thought or moving become 'swifter' or easier are directed towards other relevant sections of friction. "Matter means elements. Elements mean the universe. The universe means force. Respect the force that is in everything", Julie Angel cites Don Jean Habrey, one of the early Parkour coaches, in her book *Breaking the Jump* (2016: 194).

3.4 Obstacles and inclinations

Parkour suggests movement adaptation that ignores assumptions of representational perception problems by occupying common habitats, as well as those considered as inhabitable (like walls, roofs, etc.) in a deviant way. Behaving not in the fitted way of "it is like this" prompts a different perception of the scenario altering the



3.06 - Training at "Les Dames du Movement London" (LDML); 2018 organized by *Esprit Concrete*, image: m.jaeckel.

practitioner's perspective onto a city or landscape adding possibilities equally influencing their general attitude. Nicholas Bluff, the practitioner, who first incited my interest by laying out how parkour and its philosophy had changed his entire life, explains: "[y]ou adapt to the obstacles [...] instead of letting them stop you [...] our bodies are capable of doing much more than we think, while in our minds it is registered as suspect, because of what we hear from other people or ourselves" (2013).⁶ Lingering experiences can impose blockages as "[h]ow we learn to use our bodies is a way of becoming members of society" (Angel, 2016: 109). Angel here reminds the Foucauldian insights of body/behavior as one access point of how to influence and manipulate what accounts as appropriate knowledge.⁷ In Parkour the

⁶ Jaeckel. Interview with Nicholas Bluff. 2013, p 4.

⁷ This references Foucault's analysis of the relationship between power and knowledge. Foucault identifies three major forms of power: sovereign power, disciplinary power, and biopower, which all are in one or the other way active to structure, discipline, or regulate/form ways of behaviour and how to interpret them. For an accessible analysis of Foucault's work: D. Taylor (2011) *Michel Foucault Key Concepts*.

physical body “is continually changing and adapting to what we are doing and to what we are not doing” (Angel, 2016: 110) which seems to foster ways of self-experiences that is not solicited by technological interfaces of devices and games. This in turn influences the possibilities that show up, and in becoming perceptible constitute the knowledge that is shared. This addresses not just the physical aspects of jumping, but the interconnected psychologically affective ones. The interchange with an object, a hinderance, or the challenge we see in or through it, tacitly informs the in- and exclusions drawn, the gains and loses allowed to get aware of – in personal life, but also as contribution to a society or culture (Torchia, 2020).⁸

As earlier referenced Elizabeth Grosz defines movement not as an attachment to, but rather as pre-existent of a thing, and essential for the process of differentiation between objects. Motion elicits the imperceptible in the “modes of becoming, forms of change, and evolutionary transformations that make up natural, cultural, and political life”.



3.07 - the author participating at Parkour Generations London, *Rendezvous 2018*, image: Andy Day @kielgram.

(2011: 1). The affinity of Ravaisson’s interpretation of becoming in and through motion, published in 1838 (2008: 17) with her own theory seems to have provoked Grosz’ interest in his work. Habit, on this basis implies that re-occurrences of similar actions illicit tendencies. Shifting therefore structures within habitual behavior provides then grounds or options to react differently and to the unexpected. While first appearing in a primal rather subconscious re/action these inclinations become tangible through repetition and can be (re)articulated. In multiple repetitions a small jump becomes precise, until I dare to jump from the top of a wall over a wider gap onto a nearby one. If not turned into overpowering routines, these moves provide the background source for instantaneous re/action that then is based on inscribed or tacit knowledge (Polanyi, 1966a). Julie Angel describes that for the ADD Yamasaki group their knowledge “was the result of vast, immersive and innovative experiences and of the

⁸ The reference relies on Kasturi Torchia’s expertise, not only referring to her paper in the *Hyphen Journal*, but also draws on my personal experience from training with the London based ADD group *esprit concrete* of which she is a co-founder. (<https://forum.moversmindset.com/t/059-kasturi-torchia-mental-wellbeing-esprit-concrete-and-sharing/420>, accessed: 18.08.2020)

emotions they had felt through years of dedicated training. [...] The practice had become part of their consciousness, their intuition and sense of being. It existed because they shared with one another the activities learnt and knowledge gained" (2016: 104). Next to Parkour and ADD, also improvisational technics in contemporary dance forms (including street dance variations as breakdance, hip hop, a.o.) build on such insights. A versatile vocabulary in movement expression only becomes possible on the background of a trained multiplicity of moves. A leap or a part of a certain move may first be recalled as just having "felt right", then possibly be analyzed and rehearsed in small steps. Encouraging spontaneous action by diversified repetition applies also for forms of contemporary dance allowing the practitioners to counter movement expectations and to transgress the inscribed choreography of spaces.

Ahmed's afore mentioned observation that imposed qualities onto a thing or body can achieve an almost tangible impression, recalls that information often impinges in a haptic-sensual way by the accompanying sensation. The fact that even physical imagination in intra-action fosters the readability of abstract information echoes in Natasha Myers research on embodied methods for understanding the highly complex structures of molecular actions in protein foldings (2008).⁹ In this case, to be "in touch" entails that physical methods like mimicking through embodied experience of movement in space provide access to highly abstract information of interleaving. In return this highlights that physically enacted communication via social gestures, as Ahmed describes, indeed subconsciously impinges upon the cognitive system. The researchers in crystallography whom Myers follows, may not have been trained to express themselves through motion. Even without rehearsed knowledge how to twist the arms, legs or torso involved in imagining the folding moves, it was the enactment of embodied actions inciting a sudden leap to cognitively grasp perceptual dimensions. In Ravaillon possibilities of change are accompanied by the experience of resistance whose intensity evolves as a degree of reality. The physical discovery of dimensional constraints encountered by a folding move guided along multiple axis creates an idea for limits, but also of unforeseen stacking situation. Proprioception allows tracing moves or "foldings" through literal movement of bodies or their adjunct parts in their relation and location in space.

⁹ The importance to understand these foldings just became actualised in the search for a COVID19 vaccine. There are even open online portals for puzzling on these structures: <https://fold.it/portal/node/2008989> or: <https://foldingathome.org/covid19/> [accessed: 3.5.20]

3.5 Effort and intensities

Movement for Ravaisson emerges by “an excess of power in relation to resistance. The relation and the measure of both [...] are present in the consciousness of effort” that intersect as interdependent elements of action and passion enabling “forms of existence” (2008: 43). Neither by pure passion, as the inward relation, nor through pure action, as outwards oriented experience, the endeavor of self-location or orientation would be possible (Ravaisson, 2008: 45).



3.08 - training at “Les Dames du Movement London” (LDML) 2018; organized by *Esprit Concrete*, image: m.jaeckel.

Resistance provides a call-back from the surrounding and a reassurance for the self. Effort in this interpretation then manifests mutual impact in resistance, as “site of equilibrium [...] the middle ground” (2008: 43), where the two extreme forces, of passion and action, intersect and are “realized in the sense of touch” (2008: 43). Due to the identified reciprocity between the two forces, it is touch which initially confirms all the intermediary degrees stretching between them (passion and action). The mutually affective impact of touch in Ravaisson’s concept of effort provokes Merleau-Ponty’s notion of the reversibility of touch, which he designated as the intertwining or chiasm (1968). The particular emphasis on adaptation to the urban or rural environment in Parkour/ ADD can be related to such intertwined relationality in the direct and haptic sense of touching surfaces “by sight, the very touch, smell, strength and grip of surfaces”. This essential information provides the practitioner to “know how the surface will feel and respond to the weight of their bodies when wet, when dry and when approached from different angles” (Rawlinson and Guaralda, 2012: 7).

Christoph Brunner, whose interest focuses on the intersections between media, affect, and aesthetic politics, considers “the becoming of an environment through movement as relational intensity” (2011: 145) that reaches beyond the interpretative manner through exceeding the imaginary. Positioning affects “at the cusp of an event taking form and being perceived, they give volume to the experience (Deleuze 1988)” as intertwined “affective relational intensity” that as quality or force also precede the effects to be experienced become inscribed. Aside of perception, the human imaginary and the capacity to choose different pathways Brunner assigns as source of intensities “the affective potential of the

entire ecology (human-body-organism-environment)". By providing the "tangible compartment of affective force in the event" as the "strength or duration ... of the [movement's]¹⁰ effects" (Massumi, 2002: 24) the action is realized (2011: 145). However, Brunner's reference to Brian Massumi diverts from Ravaisson's specific relating it to effects from analog friction. In comprising the entire ecology into the process of affectivity though reminds James J. Gibson's affordances as the complementary interplay between the "animal and the environment" (1986: 127).

While affordances in the theories of psychologist Gibson define the development of and being in action as intermediary occurrence rather than a singular incited act, the notion is also connoted with value and modification. Important aspect of Gibson's concept is the invocation of "a vision of cognition, and perhaps other mental processes" that are not exclusively occurring "inside the brains of organisms". For Rowlands cognition in organisms therefore is achieved partly by "what they do in and to the world that is outside their brains - whether their bodies or the wider environment" (2010: 49). Rather than owed to one specific move, it is consequent actions, affects and responses of motion, that multidirectional and contextualise time, space, and matter(ing) as relational. Material-discursive aspects of moving that so obviously are integral to Parkour/ADD consequently must be considered as generally relevant in terms of E. Grosz' argument that movement precedes things' becoming.



3.09 - training at "Les Dames du Movement London" (LDML) 2018, organized by *Esprit Concrete*, image: *Esprit Concrete*.

3.6 *Intra-actively* shifting boundaries

The notion of material-discursiveness is essential for Barad's Agential Realism (2007) as neither matter nor meaning are "articulated/articulable in the absence of the other", but rather elicit each other (2003: 822). This co-constitution is expressed in the re-definition of interaction as *intra-active* engagement, where meaning is attained by emergence from the

¹⁰ Massumi however talks in this sections about images and not physical movement of human bodies. (2002a: 24)..

field of inherent possibilities (Dolphijn and van der Tuin, 2012: 55)¹¹ in a process of mutual exchange and boundary making. Artist and researcher Annette Arlander specifies that in Barad's Agential Realism the acknowledgment of "forces at work in the materialization of bodies are not only social, and that the bodies produced are not all human." (2017: 133). Substantial for these iterative becomings are the performative processes where "[b]oundaries, properties, and meanings are differentially enacted through the intra-activity of mattering" (Barad, 2007: 392). On the basis of a general relationality intra-action evokes matter and meaning in and through material-affective dimensions. Emphasising the importance of affectivity, as proposed in movement enactments, intra-action defies the sense of one-sided action. Barad defines agency as a doing-being that through processual emergence fosters the dynamic of an enactment of differentness. An iteratively unfolding as coming to matter, where the world emerges as mattering in *spacetime (spacetimemattering)* (Barad, 2003: 817; 2007: 137, 181, 235; 2010). Such unfolding, far from being a forward oriented process, entails an ever-changing archive of previous impact of affectivity that comprises human and non-human materiality.

However, abstract that may seem as being developed from quantum field theory some relevance can be drawn to psychic inscriptions. The co-founder of the London based *art du déplacement* group (ADD) *Esprit Concrete*¹² Kasturi Torchia, a trained psychotherapist and ADD coach, takes a stance towards the affective side of jumping by asking "Gaining or losing? How we really meet, greet and overcome the obstacle" (2020). Torchia argues that material aspects or the sheer presence of an object may re-evolve embodied experiences that have become traits (habits) of our personality. In meeting the object, a relationship is formed exchanging parts of us with it in the encounter. Addressing the process of gaining and losing which is enacted by interacting with an object, in this case in jumping, Torchia states that we never face an object unaffected and furthermore without habitual constraints. Such tendencies in behavioural movement patterns that are informed by other experiences and places in our lives influence us. Addressing these in movement may allow habitual change.

11 Interview with K. Barad: "[...] what I mean by the notion of "intra-action" as proposing a new way of thinking causality. [...] which gets us to shift from interaction, where we start with separate entities and they interact, to intra-action, where there are interactions through which subject and object emerge, but actually as a new understanding of causality itself."

12 Talk at the *Hyphen symposium* in March 2019. *Esprit Concrete* has been founded by Kasturi Torchia and Yao Gogoly in 2016 <https://espritconcrete.com/> (accessed: 20.08.2019)

Aspects of material-discursive becoming evolve into an always just momentary *fragility of presence* (Noë, 2015b). Equally enabled, as constrained by the restraints (inclusions) and exclusions, which define the process of materialization due to “material dimensions of regulatory practices” (Barad, 2003: 822). What emerges (i.e. becomes knowable) is dependent on the mutual entanglement between the materials and the discursive defining how and which enactment emerges from the iteratively evolving intra-actions. Any momentary *fragility of presence* is consequently not solely incited by the enactment of a human agent but emerges *intra-actively* in a complex process of boundary making practices. The *agential separability* of the acting jumper is very much dependent on the situation, material components, affectivity, and other aspects. By conceiving walls, barriers, blockages, stairs, rims on a wall, bars, and poles as chances rather than obstacles the unexpected, a possible change of perspective, is studied. Parkour as material-discursive practice makes non-common in-and exclusions that considers development of personal abilities as intertwined with physical improvement on multiple levels of embodiment. The ADD coach Georgia Munroe describes her interest as focusing especially to explore that “some of the connections we have made between our [...] personalities and how our training is influenced by more than just our surroundings”.¹³

By bringing forward possibilities of different mattering/meaning of the built world around us Parkour/ADD's intra-action fosters an awareness for the inherently imposed social structure. My own experience with



3.10 - Still from *Gravité*, Nicholas Bluff, 2011, camera: N.Bluff.

the Esprit Concrete ADD group in London confirms that ADD changes the view onto the cityscape by creating “new meanings and memories for normative elements” which also increases the “sensory and emotional awareness of the city” (Rawlinson and Guaralda, 2012: 8). In confronting learned patterns and hindering attitudes it further helps to address own limitations. The participation in the *Esprit Concrete*¹⁴ sessions incited impressions, which shed a different light on other projects in my life projecting them as suddenly achievable. Lessons

¹³ Description from the Movement Workshop Themes for *Les Dames du Movement 2019* event, 30.08.-01.09.2019 London, <https://www.facebook.com/events/275101949876651> (accessed: 30.08.2019)

¹⁴ Participation in weekly class: <https://www.facebook.com/espritconcrete> (accessed: 20.08.2020)

taught by the sensation of an intuitively correct foot placement that allowed me to climb up a wall, impacted that more than this wall suddenly appeared manageable. Another case I remember well was during the cool-down of an *Esprit Concrete* evening session (August 2018) when the coach Georgia Munroe told us to grab for our big toes while bending with a straight back. “Now, look up!”. Her instruction beamed my gaze directly into the sparkle of distant stars stamped out beyond the dark silhouettes of newly built concrete blocks. Reconnecting to this framing of “nature” I became aware of the immediate environment. Playing the city in Parkour/ADD style allowed to feel myself, despite being still alienated by the rough cityscape, but now standing in a circle of six co-practitioners, all looking up into the sky, feeling the cooling breeze boosted by the sharp concrete corner of the high-rising towers surrounding us. Far up in the dark sky the slightly pulsing twinkle however promised an opening exceeding the limiting architecture. Noticing that while in the city, I had barely given space to the fact that this sky that illuminates the countryside and promises calm and seclusion, too belonged here.¹⁵

In Parkour/ADD, as in Barad’s Agential Realism, the agential part, the move, and the environment’s newly disclosed possibility are only articulated/articulate in the intertwining with the other (Barad, 2003: 822). Bodies, as that of the jumpers, participate in the creation of meaning as *objects of knowledge* (Barad, 2007; Haraway, 1988) by engaging in the cityscape. Their re-interpretation only occurs in the ongoing doing-being (agency) of intra-acting with walls, stairs, rims, etc., incited by their appearance as practitioners in (different) responses to the environment. Bonded by mutual affectivity into an in-separability that at the same time defines and differentiates practitioner and environment. They emerge as entities through and in an entanglement of intra-actions in *agential separability* (Barad, 2007: 140) as the a/effectively acknowledgment of object-



3.11 - Parkour Generations London, *Rendezvous 2018*, Wembley Park, image: Andy Day @kielgram.

¹⁵ Own notes, 27.08.2018, *Esprit Concrete* Session at Canning Town

relations.¹⁶ Presence in such situations is a local condition, never enacted once and for all, but incessantly continues - a stop-motion process that yet never stops. Marked by inherent volatility the fragility of presence (separability) *intra-actively* is activated by incessant changes. Specifics of a situation are addressed as phenomena, agential separability, as 'objectivity', is enacted in intra-actions thus never absolute, but a situated condition of *exteriority-within-phenomena* (2007: 140). Each movement differs, and so does each jump in Parkour, as does the ground, and the jumper's condition. Material-discursive practices (2003) are open-ended practices where exteriority, an explicit 'outside' boundary, is bound to situatedness and the intra-activity of *agential separability*. This binds separability as intertwined with mutual engagement, where fixed boundaries are never gained as a final statement, but each time negotiated anew. Therefore, all moves are interwoven in the iterative evolution within the processes of ongoing reconfiguring that marks the world's performativity (Barad, 2003: 818, 823).

Barad's theory undoes the construct of an unaffected and unaffected onlooker, and importantly assigns relational 'objective' outcomes to intra-active involvement. In the field of the philosophy of mind a comparable undertaking is attempted by thinking through the 4Es¹⁷ to undo cognition as an only internal organisation. The philosopher Mark Rowlands early on referred to Gibson's notion of the optic array, as describing the structured arrangement of light providing the source of information for perception. Even when in Gibson's interpretation the environment is still considered 'mute', he realised that no such things like a passive observer exists, as living organisms "will actively sample the optic array. When an observer moves, the entire optic array is transformed, and such transformations contain information about the layouts, shapes, and orientations of objects in the world." (2010: 35). For Rowlands, Gibson's concept of the augmentation of action acknowledges a tendency for the weakening of the notion of mental representation, which generally empowered Cartesian cognitive science. Rowlands therefore confirms that "some of the roles traditionally played by mental representations can be taken over by the perceiving organism acting on the world in appropriate ways" (2010: 37).

¹⁶ Barad, 2007, p.140. "The notion of agential separability is of fundamental importance, for in the absence of a classical ontological condition of exteriority between observer and observed, it provides an alternative ontological condition for the possibility of objectivity."

¹⁷ 4E stands for the research in embedded, embodied, extended and enacted cognition.

It was Nicholas Bluff's story about the impact of the philosophy he had drawn from the experience of Parkour, altering his life, that nurtured my interest about the transformative power of perceiving otherwise through motion. If hitting an obstacle provides the clue to think otherwise, rather than to detour, a strong indication for the counter steering force of moving otherwise is given. Incited by events boundaries between known and unknown are shifted from within (Haraway, 1988: 595) *intra-actively* changing understandings that affect the concepts of conscious minds.

3.7 Place making practices

As laid out so far Parkour's framework, the traversing of a distance in a self-defined and efficient manner, predicates upon in rehearsals accumulated knowledge that provides a background reservoir allowing immediate improvisations in the present moment. The contiguous attempt of practitioners to find ways, where there are no pre-designed paths, potentially subverts the structure of the governing regime how to move through city- and landscapes. Most of today's city architecture embodies the administrative principles of societies established in the Global North, hence imply underlying rules as e.g. historical space distribution, acceleration, etc. These principles are engendered by "[t]he rhythm that is proper to capital", which "is the rhythm of producing (everything: things, men, people, etc.) and destroying (through wars, through progress, through inventions and brutal interventions, through speculation, etc.)." (Lefebvre, 2004: 55). Even unconventional architecture rarely redirects or breaks this rhythm hence also amplifies the rules of the regimes that structures the appearance of the surrounding environment.

Parkour/ADD therefore may provide an "embodied ideological critique" (Chow, 2010: 143) based on a skilled movement knowledge background. Its specificity entails to embrace adaptation not as assimilation, but rather as a confronting move in a challenging situation. Furthermore, Parkour/ADD has clear statements that address premises like non-competitiveness, humility and efficiency. In their essence of self-acceptance, judgment, and improvement, this set of ethics focuses on the experiences of direct encounter and movement. Emerging from the fringes (banlieues) of French cities in the late 1980s Parkour/ADD specialized (but is not limited) on action in human-designed cityscapes. Operating between appropriation and counter action, its example may embody apt possibilities for relating to everyday life in the current era, discussed as the Anthropocene, by

being almost entirely human influenced.¹⁸ Impacting on the practitioner's personal lives through experiences of interaction as "place making practices" (Ong, 2013; 2014a) altering the view onto the environment they traverse. In countering the "it is *like that*" (Ahmed, 2014b, original emphasis) impulse from the surrounding world Parkour/ADD's insistence on practice as an enabling habit, an active "set off", provides a mindset against being kept in one's place (Ong, 2013). Parkour, like Iain Borden states for skateboarding, incorporates some critique of commodity consumption, by making use of urban space and buildings without buying anything. Indeed, it shows a way to produce things differently – to "expend energy not as work, but as the production of emotions, actions, effort and play" (Borden, 2003).

In the reoccurring moves bodily consciousness accumulates a potentiality for the development of yet undetermined action (Ahmed, 2006; Ravaisson, 2008). Established in different degrees or layers of effort, or reality, this implicates also latent possibilities for understanding agency otherwise. It could be interpreted as tendencies that within a person's progressing negotiations with other matter redirects the conception of agency as "doing/being in its intra-activity" (2007: 235). A speculation worth recalling that the entire

space/body relation of world/self-exploration that a small child with still to be developed orientational language and theory itself undertakes, is incited by sheer



3.12 - Stills from D3E24 Baby Body Sense; Research E. Thelen, https://www.youtube.com/watch?v=RI3t_hsFzX0.

bodily movement experience (Thelen and Smith, 1994). Arguing from this insight Esther Thelen states that the point of a dynamic systems theory approach "is to show how knowledge and motivation arise in a dynamic cascade [...]. In other words, knowledge and motivation are emergent with perceiving and acting in the world [...]. Every act in every moment is the emergent product of context and history, and no component has causal priority" (2005: 271).

3.8 Mere-ness / zone of knowability

Worlding expressed by 'things' comes into the zone of know-ability or accessibility and achieves a *fragile presence* not just by skills of access, rather equally due to a pervasiveness

¹⁸ The geological term is meanwhile widely used to address the current era, even before its sedimentation can be classified scientifically.

of understanding *beyond agency* (Noë, 2015a). The acknowledgment of the limits of human-centred agency becomes evident in events, where affectivity and evoked response-ability may elicit somewhat unguided ‘moves’. These reorganising moves, carried on spontaneously and without deliberate control, may be accounted as mere action, equally as personal or sub-personally incited phenomena of the embodiment level (Noë, 2015a: 2). Such *mereness*¹⁹, as proposed by Noë, seems to belong to capacities our habitual being is able to produce as a new kind of consciousness, one not aware of itself, but as already inclined to act (Grosz, 2013: 223). Parkour/ADD practitioners, as do dancers, know these instances of a sudden move almost out of nowhere that “feels right”. Such move eventually hard to repeat or analyse, defines for Grosz an “obscure intelligence”(2013: 223). Affectively operating below the level of will, consciousness, intentionality and reflection this ‘intelligence’ becomes enforced on a backdrop of sameness that paradoxically enables “the creation of free acts and new knowledges” (2013: 224). It defines the occurrence of *mereness* as sudden physical performativity, that is not informed by a certain personhood, but a shift occurring in the iterative intra-action of re-articulation. *Mereness* then appears when room is made, that allows to incite matter’s iteration in its own meaning. Not yet demarcated, it is the emergence of a motility turned into gesture or action, the appearance of something unexpected, which enters the realm of knowing.

“[P]ractices of knowing,” according to Barad, “cannot be fully claimed as human practices, [...] because knowing is a matter of part of the world making itself intelligible to another part.” (2003: 829). Agency is consequently understood as the *dynamism* of material-discursive practices. The jumper, and the wall, establish their specific intertwined relationality only in the moves, and the landing elsewhere. As cutting together/apart this establishes agential boundaries of defining/separating in mutual constitution (Barad, 2003: 818, 827).

“In the end instead of doing one big move [...] I understood it is in the movement, in the action of moving around” (Bluff, 2013).



3.13 - Still from *Gravitá*, Nicholas Bluff, 2011, camera: N.Bluff.

¹⁹ Mereness: state or quality of being merely something, or of being small or insignificant. <http://www.oxforddictionaries.com/definition/english/mereness> [Accessed at 19.June.2018].

3.9 Response - self-affection / touching the other

Jumping in Parkour provided an exploration in terms of material-affective dimensions by going “out of bounds while staying in touch” (Barad, 2012a: 208). Activated in actual or distant touch, spontaneous tendencies foster a different orientation, while emerging on a habitual background training. This is owed to the reciprocal response-ability of touching matter(ing) that at the same time constitutes a connecting point, and an option of differentiation. The way something is touched and thus relating to resonance, impacts the embodiment and situatedness of habit and tendencies. Habit, therefore, cannot just be seen as a memorised reaction, but provides a potential ground for action within the constant movement and ex/change that defines mattering. Not just the literal, haptic moment of meeting the ground, as in the jump in the example, establishes a form of touch. In Barad touching is also activated in the *intra-active* – meaning-making - measuring action, which never can be a pure calculation as it is performed in mutual involvement. Intra-action, the becoming within action, incites response/ibility from either side as an openness to channel in that which comes back. Agential Realism emphasises that intra-active materialization is based on the general relationality of matter(ing) and appears in and as response-ability of matter (2012a: 208). As such, touching is not just a matter of response, but establishes matter as “condensations of response-ability” (2012a: 215, original emphasis). The aspects of *being touched* or *touching upon* something affect the movement or direction that sentient or otherwise affectable things turn to or away from, thus defining their momentary orientation in this world (Ahmed, 2006; 2014b). This is not just adjunct to bigger action but underlying the general motion of *vibrant matter* (Bennett, 2010).

The transposition by being in touch (within or beyond the bounds of the known or accepted) passes the affective momentum of re/action on: “Touch moves and affects what it effects” (Barad, 2012a: 208). In touching upon parts of the



3.14 - Still from *Motus*. 2011; camera: N.Bluff. <http://www.nicholasbluff.dk>.

cityscape in embodied movement actions Parkour participants become part of a specific shared performativity, that creates and reacts to responses of matter(ing/meaning). The resistance-reassurance paradox at the inner core of the mutually responding entanglement

turns potentiality into habitual movement - emerging as the new background on which change becomes possible and perceptible as such.

Recent interpretations of neuroscientific research results (Craig, 2002), delineate touch as set deep into the experience of the event that interweaves space and being. The neuroanatomist A.D. Craig states that the recognition of “sensual touch is incorporated into the interoceptive system has strong implications for the neurobiological and health effects of conspecific contact [..]”. Therefore, the experience of being in the world as “basis for human awareness of the physical self as a feeling entity” most likely emanates from the body. While the “neural sensory system is part of an entire network involved in homeostasis [as] autonomic, hormonal and behavioral neural mechanisms that maintain optimal physiological conditions in the body and that respond in an integrated and ongoing fashion to all interior and exterior environmental challenges” (Craig, 2002: 663–664). Kinaesthesia or proprioception as the sense that allows us to gain the sensation of body position and movement (Tuthill and Azim, 2018) is the first sense developed. Transforming mechanical impact into cellular signals known as mechanosensation (Garcia-Anoveros and Corey, 1997), the sensibility to external contact through touch, defined as exteroception, develops parallel to proprioception. Both are essential for first movements even throughout pregnancy in mammals (Grunwald, 2017: 27–28). The importance of such feedback is reported by the case of a patient, left only with the ability to contract his muscles, but unable “to orchestrate these actions into purposeful behaviors, in essence leaving him immobile, unable to stand, walk, or use his body to interact with the world” (Tuthill and Azim, 2018: R194).



3.15 - Theory in practice: the author trying the same wall again a year later at LDML (“Les Dames du Movement”) 2019 final jam session, organized by *Esprit Concrete*, image: Monika Jaeckel – stills from mobile in selfie mode.

Yet the sentient experience touch provides can never directly incorporate something external. Transmission results depend on presets, extensions, or concepts (Noë). Later refined in Merleau-Ponty’s chiasm for Ravaissou “only the exteriority of the actuality of things”, but not “their dispositions or powers” can be perceived without fusing “the act and

the apprehension of the act" (2008: 39) in consciousness. This tying of consciousness to the experiencing of a body in space, suggests that also thought must be considered as embodied, as its impulses are received by forms of intra-action. In combination with Barad's argument that "thought experiments are material matters" (2012a: 208)²⁰ this indicates that theorizing cannot be excluded from the basic concepts of being. Following Grosz's insight that movement essentially contributes to the appearance and experience of bodies and other things, attributes motion the defining momentum. Theory thus appears as translation into abstraction, emerging from such differentiating forces of movement.

In physics electrons are regarded as never being really touching themselves due to their negative charging. Their energised movement and possible moment of contact with neighboring ones is based on the known attraction/repulsion asymmetry. In Quantum field theory this repulsion that sits at the core of the particle's attraction, as confused or queered "touching of touching itself", in fact "a virtual exploration of every possibility". Hence these entangled relations of becoming of iterative reconfigurings, which electrons, as all materials are subdued, provoke "that materiality "itself" is always already touched by and touching infinite configurations of possible others, other beings and times." (Barad, 2012a: 215). This screening of possibilities throughout the explored levels of (self)touch entails, in Barad's abstract definition, an infinite alterity. Touching down on matter in (between) jumps or after, always implies some self-touch, as well as proprioception and exteroception. In touch we reassure others, and ourselves, as all touching not only entails the sensitive, as also the sentient. Touch/self-touch impact the neuro-psychological status of a human (Grunwald, 2017: 147–151) directing deterioration (as in irritating situations) towards stability (Grunwald *et al.*, 2014). To be in touch apparently is not just essential, but means "that touching the Other is touching all Others, including the "self," and touching the "self" entails touching the strangers within" (Barad, 2012a: 214).

3.10 Breaking the jump – breakin' habits

Breaking the jump is a terminology in Parkour to analyse the jump process often in retrospect to review the established habit regarding entailed or excluded possibilities in relation to the embodied routine. The radical openness in Parkour/ADD in facing an unknown pathway by

²⁰ see also the research of E. Thelen / Smith, L.B. (1994). A dynamic systems approach to the development of cognition and action. (A Bradford book). Cambridge, Mass.: MIT Press.

combining perception and action, establishes the conception of the Parkour practitioner as intertwined with the moment of touch (before, during and after the jump). Movement constitutes a tendency that entails spontaneity, both active and passive, as an immediate necessary re/action in the differentiating moment of motion. It allows for the idea of “distinguishing the subject and object of knowledge” (Ravaisson, 2008: 53–57). Yet, mutually bound into the processual doing-being of agency separability emerges from the inseparability of all elements present in the situation that encompassed the action. Barad expresses the dynamic play of in/determinacy²¹ at the basis of materialization through the double bound meaning of matter and mattering, as an ever-open process of becoming or worlding.

Any subject must be acknowledged as dispersed and interwoven with those bodies that as objects of knowledge are *intra-actively* involved in the bringing forth of meaning as relational to all other objects. As iterative and multi-leveled processes of unfolding separability is achieved within a certain setting (*exteriority-within-phenomena*). It establishes its own framing by specific in- and exclusions, neither entailing, nor providing a positioning as a static one-sided agency. Such a definition contests not only that within human reach would be a strictly ‘rational’ or unaffected ‘objective’ outside position, but also that the social world or culture exists apart from a natural world. In fact, it is the reciprocity of agency that encompasses the ontological inseparability of intra-acting components as phenomena (i.e. units of reality). As such, objectivity can never be related to as absolute exteriority, but rather is a situated *agential separability*.

The practitioner only becomes in intra-action with the environment. Separability becomes possible because of the initial inseparability. *Agential separability* thus places emphasis on the performativity of our ways of observing, describing and intervening in the world we are part of (Barad, 2007: 184). The examples of moving differently as practiced in Parkour/ADD²² offer the insight that rather than having a perspective, we are in one (Alcoff, 2006: 117). Instead speaking for sole action this argumentation emphasises the mutually nurturing loop as persistent feedback between body and mind, non-human and human, matter and

²¹ Barad. 2012, pp 214-215. “Matter is never a settled matter. It is always already radically open. Closure cannot be secured when the conditions of im/possibilities and lived indeterminacies are integral, not supplementary, to what matter is.”

²² For many practitioners Parkour/ADD may just be an exploration of possibilities of the self. However, in its original form there are traits that can be regarded as critical countering the rigid settings of urban choreography. Chow argues that as a “participatory practice, however, parkour is a form of embodied ideological critique, as the body learns to respond to the inconsistencies and antagonisms of advanced capitalism that manifest in the built environment.” (2010: 143).

meaning. Aspects that urgently need to be considered as co-constituting in these times of over determined and constructed orientation. The changing of pathways happens as intra-active process incited by multiple inner and outer affectivities.

4. Project: *signalling - at the molecular level*

Chapter 4 focuses on the development and performance of the *signalling – at the molecular level* project. The process was informed by ideas of signalling and response in the widest sense. Core of this piece were the unique INTUERI e-textile pieces by the interface designer Gabriela Guasti Rocha and a performative writing text by myself (2019).

4.1 Towards the project

Motion as founding principle, as laid out in earlier chapters, in philosophical interpretation is described as initiating force. Definitions of movement as pure physical experience are provided in an anthropocentric acknowledgment in that each child before language learns by moving. As responses towards and within an environment these (movements) therefore have to be interpreted on much wider field than commonly acknowledged. Gestures and moves thus provide a form of knowledge that is ubiquitous, also in the specific culture where I am educated in, yet not rated as contributing to knowing as such. Epistemological notions are commonly regarded as dominant, especially when emerging from cultural concepts that regard themselves as enlightened, while ontological insights may be treated as subaltern. The project's attempt in theorising and conceptualising has been evaluating how new materialism's onto-epistemological approach allows for a redefining of normative terms. For this the work started with a text deploying a style of performative writing, it further informed the performance and a journal text (Jaeckel, 2019). The following extract is from this text.

In the enlightened definition, which distinguishes itself as refined, nature is demarcated an outsider. By declaring shape and skin a distinct border for the human animal the physical form provides an outline that discerns the body from the environment and excludes the human from their own impact on nature and vice-versa. Further certain abilities and looks have been rated as 'other' and not belonging. In this cultural definition, non-human beings and matter, as well as even some humans, are regarded, at least in some sense, as being of 'a different nature'. The realisation of such bifurcated thinking about different types of nature would in fact not allow living organisms to thrive. For Bruno Latour the boundaries that shall distinguish between organisms are thus endlessly blurred (Latour, 2005: 227).

Inspired by plant communication enabled by mycorrhizal networks the project oriented itself towards the idea of signalling at a molecular level that allowed to rethink human's

matter(ing) from a de-centred point of view. A perspective that entangled body, mind and environment beyond the theorising cuts, that bifurcate reason from affect, and thus distinguishes mind as disconnected



4.01 – Left: mycorrhizal networks between trees from *Intelligent Trees*, still from Film Documentary by Suzanne Simard and Peter Wohlleben (2016). Right: mycorrhizal root tips (amanita) - via Wikimedia Commons (Frazer, 2015).

from the body, and culture as superior to nature. The approach of thinking through the molecular allows stepping away from a singled-out atomic understanding that marks western Modernity. Instead of applying the unique and individual, the approach through the molecular rather suggests a relational, grouped and mutually influencing idiom of what is regarded as ‘singularities’. As the “smallest particles from which identifiable bodies are made” (Jaeckel, 2019) a molecule, usually a group of two or more atoms, distinguishes itself by holding no electrical charge. In fields like quantum physics, organic chemistry, and biochemistry, yet the term molecule can also be applied to polyatomic (i.e. electrically charged) ions.¹

In Barad’s Agential Realism the known double slit experiment² plays a central role for its demonstration of the duality of the wave-particle paradox that is essential for Bohr’s concept of complementarity. While developing the project idea to work with movement practitioners on the concept of intra-action in terms of *response/i/ability* I was struck by the idea of amplifying electromagnetic waves. A field that was opened up by the encounter with the INTUERI work by Gabriela Guasti Rocha. I will return to this soon, but first want to explain my route towards the title of the project, as *signalling - at the molecular level*.

Thinking towards smallest particles and interference molecules caught my interest as to understand the (intra-)acting of matter in general, and secondly were informed by insights in non-human, plant-based communication as explained by Suzanne Simard (Wohlleben and Simard, 2016) and Monica Gagliano (Gagliano, Ryan and Vieira, 2017). In regards of how to imagine tracings of the molecular reference is taken in Natasha Myers research in protein foldings (2008, 2009), with her focus set on the molecular (signalling) emphasising the unpredictability of movement and its ever-different emergence. This perspective underscores

¹ Wikipedia ‘molecule’: <https://en.wikipedia.org/wiki/Molecule> [accessed last 02.02.2021]

² Demonstrated first in 1901 with light and then later (1927) with electrons (later also with atoms and molecules) it demonstrates that these are not either wave or particle, but behave according to situation/apparatus with either complementary characteristics of both.

the immanent resonance of body – environment intra-actions, thus fostering my intention to rupture the dominant interpretation of a one-sided human contribution in knowledge creation towards a co-constitutional understanding. Throughout my research I followed several researchers in the field, next to Erin Manning’s activities,³ it was also Matthias Sperling’s current PhD project which approaches the body as knowledge generator.⁴

Myers further provides insights for embodied understanding by her description of the researchers’ need to physically imitate the abstract visualisations of molecular foldings. Therefore, regarding movement as a form of knowledge, the research’s foremost concern is the emergence of unusual, undefined, or overlooked communication that all motion entails. Rather than seeking a definable quality of movement that would define it as fitness or appropriate, the project looks for non-conspicuous appearances that are deemed negligible. Mere-ness in motion (gestures), as discussed in chapter three, is conceived as a way of thinking that relates to the molecular in the sense of underlying psychic, physic, and chemical motions. Thus, affective initiation, even in a metaphorical sense, causes activity prior to what appears as self-induced moves. Motion, as generally involved in the interlacing of knowledges from different and interfering sources, intertwines these and at the same time enforces a de-centring of the position of the human. Despite the common thinking about moving as a solely voluntary act, we are also always part of *being moved – to moving*.

The disassociation of the meaning of movement from being strictly initiated in human gestures allows to realise them as distributed and shared signals amongst a diverse field of sources and participants including animals, plants, and other informants of matter(ing). From air flow, slight vibration, up to physical felt interaction, motion is approached as a meaningful expression, yet often neglected or not fully recognized as a form of coming to know. Motion emerges as marks, made, or left behind by human and non-human critters (Haraway) as well as things - from matter generally as that is what material assemblages are made of. It includes the growth of plants and their direction taken, with the selection of the ground chosen to grow in, the bleaching of a reef, the extinction of an animal or the accelerated spreading of a virus. Often these occurrences are put aside as negligible murmurs, however,

³ <http://erinmovement.com/> [accessed 10 May 2021]

⁴ See for example his performance and the symposium for the founding event of *Institute of Neurochoreography* in 2018. <https://www.sadlerswells.com/whats-on/2018/matthias-sperling-institute-of-neurochoreography-first-open-congress/> [accessed 10 May 2021]

even consciousness informed by an education based on western modernist Exceptionalism slowly and painfully must accept that these signals are there. They are about to manifest an era that expresses the hubris of some in the name of all mankind: the Anthropocene with a human-induced climate crisis and its devastating consequences. Most impact is distributed through the specific in- and exclusions made by the knowledge system established as dominant. Thus motion, if acknowledged especially in the bits that tend to be overlooked, enables the transformation of data into information on a very basic level. Movement is the initiator that brings forth one of the possibilities of mattering assigning meaning in encounters, which are thus named intra-actions. Thus, it is not just a human or human induced technology that induces meanings, but these may also trigger an unforeseeable impact. Movement is there anyway, in us, around us, through us and without us.

It is the cells, on a molecular level where initial exchange happens that not only allows living forms to strive, but also processes to happen, and thus exchange to take part. These minor or less perceptible interchanges influence the body and its organ located at the top, the brain, on multiple levels. They define who we are, how we feel, how we react as humans and consequently shape our environment through our actions. Such inter-, though often rather intra-actions, happen on all levels, leaving traces or marks also at the molecular level.⁵

Almost right from the beginning, my own interest included the negative or destructive forms which, in approaching movement, often are left aside. The discovery of the fascination for movement nearly coincided with my father's onset of Parkinson's disease. Usually an active person my father's tragedy incited that even my early human-centred efforts to understand movement were coerced to include not just flourishing, but also decline and the possibility of negative plasticity. Wagner-Lawlor argues that these complementary aspects that are reflected in Catherine Malabou's approach of plasticity reveal "an embodied principle of biological life. Both the yielding to form of 'negative plasticity' and the giving of form of 'positive plasticity' allow biological life to be altered by external pressures: to adapt, to be resilient" (Wagner-Lawlor, 2018: 4).

Borders, as skin, considered substantial for the physical, similar to those invented to prevent human migration while marked as cohesive, however are porous. The movement of the

⁵ As by now we are all confronted with the molecular workings of the COVID-19.

cellular exceeded what progress-oriented thinking describes as reasonable in a western modernist sense. Even in obvious silence movement still produces traces. As such, neither good or bad can be assigned to motion per se, when highlighting movement's indispensable status within and beyond the thinkable. The significance of movement for matter's mattering in providing the basis of knowledge, furthermore, underscores that interferences are unavoidable. To acknowledge these demands the assessment of responses that are less perceptible, unwanted, or neglected. In addition, implications that emerge from perceiving how these interferences affect, request a change in the known ability to respond.

Acting, as well as being acted upon, both are spreading marks across bodies, one might say as a responding pursuance incited by involved mattering measures. The influence of such matter/measuring can be related to the influence of *embodied reasoning* as argued in Natasha Myers' research (2008: 189). Myers' work, though, is not an argument or further proof for embodied thinking, rather incites 're-translating' (re-minding) of the physical part in the process of what is considered as purely rational and theoretical. Thinking at the molecular level demands thinking about impact and possibilities beyond 'natural' borders, as 'we' define them. It accentuates Karen Barad's notion of intra-action, where such borders dissolve into a systems (theory) understanding that enforces de-centring of the human at its very systemic foundation. Especially the conception of one of one-sided human contribution in knowledge creation towards a co-constituting understanding.

4.2 Method to *meshod*

The approach as practice informed artistic research is based on an associative way of thinking. By the "recognition of the generative potential of the ambiguity and indeterminacy of the aesthetic object" (Barnett in Bolt, 2016: 140), method (within this project) indicates a metaphorical application of notions to enable the traversing of fields. This allows a momentary renaming of method as *meshod* to hint at the unavoidable entanglements, as way of introducing a porous framework into the research thematic. Intertwining the key notions of movement and performativity as foundational, the term allows a responsiveness to undercurrents intrinsic to the theoretical and practical levels. Conceived from this perspective, theory informs the practice of doing movements, and moving provides a way to plough and access thoughts. This understanding of both as two different ways of telling and/or doing things employs theoretical discourse in performative presentations, while the

experiments that interlace theory and practice inform theory in return. Regarding either form of knowledge as equally important when conveyed for audiences, which are used to classify, they will react especially irritated. Text in Western cultures usually is regarded as of intellectual importance, as the default and only source of information, superior to other forms of interchange.⁶

The presentations within this project do not focus on a specific movement style but bring together practitioners from different backgrounds. Nominated as ‘dance’, the performances often are improvised, diffracted by speech as form of noise (sound) based on a text of performative writing and other not entirely predictable movements – from the molecular to Parkour. Interferences caused by movement, considered omnipresent in space and environment, become integrated into the presentation as intra-acting on a similar level as the noises of speech. The aim is to contextualize various forms of knowledge and their expressions on a coequal level. Speech's prevalence is intercepted by movement sounds, causing the noises invoked and those which move and affect ‘us’, to appear as equivalently valued. In such, these projects operated along the line of a set of experiments attempting to explore a different approach towards thinking. Considering the tacit knowledge of dance/movement as equivalent may allow to describe it as (re)translation of ontological knowing into an embodied form. In a concise account the project starts from the instruction to ‘turn it (the move, the route of thought) around’, which then becomes an exploration into what movements as a form of understanding may occur. Metaphorically approached at a molecular level the approach asks if a sensation, ignited by the experience of movement, literally can change thought. If so, would then a physical experience on the level of *mereness*, that is of yet unthought possibilities, also change the limits of what we regard as thinkable?

Though, connecting physical movement directly with increased possibilities for ways of knowing unintentionally supports an ableist and solely fitness-oriented direction, excluding some physiognomies, or differently lived abilities. Therefore, it must be emphasized that the idea of correlation between movement and what a body can do – also thought-wise – is built on the manifold of movements and the diversity of abilities, rather than an assumption of competition or ableness. Each move is different at any time, and for each body, human or

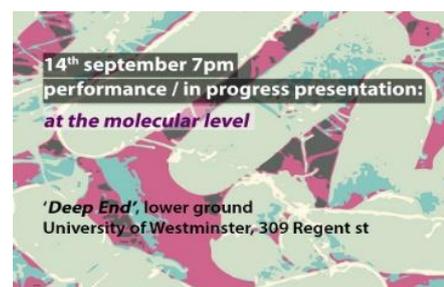
⁶ On several occasions people came up to me after a performance and apologised that they could not listen to my text, because the dancers (or other elements) would have distracted them. When I reply, that this is fine and intended, the reaction is even more irritated.

non-human. Yet, decisive is the support for multitude, which by itself speaks for the quality of motion, rather than a categorisation by size or spectacularity. Responding thus, from a molecular perspective interfering and meshing of diversity fosters immunity and as such marks co-constitution as foundational.

Conceptualizing movement as method demands the exploration of its practice, which aside of self-experience, is presented in performative events. These provide a ground to explore a learning and becoming that occurs from modes of interference, where none overwrites the other entirely but everything alludes to co-producing repercussions. For rehearsal and presentations all participating co-workers and collaborators had been introduced to my ideas when initially discussing participation for the project. Yet, while I was explaining the framework of the project, the participants were not familiarised with all details of my theoretical background material. One reason was that it would be too overwhelming, but more importantly, I wanted to leave an openness for what they bring in as their (embodied) knowledge. This provided the second essential part of the process based on the intention to hear and learn from them without influencing too much. Especially the dancers Gloria Trola and Giulia Iurza developed throughout the rehearsals, conferences and presentations their own experience and perspective on the project and expressed it as a 'learning from the object' (Trola) and a 'becoming the object' (Iurza). These insights quite stunningly correlated to the grounding ideas of the project.

4.3 Perspectivism

An early rehearsal ('in progress presentation', 14th September 2018) engaged the idea of imagining different particle combinations to compare forms of physical expressions as speech and movement. Certainly not a strictly scientific way to access voice or sound, it proved a speculative method to get away from the strict concept of language as only essence of reasonable communication. The attempt was an interpretation close to Walter Ong's observation that words if just understood as episteme in a Foucauldian way, become objectified as "neutral objects representing things and/or functions" (Stoller, 1984: 561). As words may be reduced to the space they take up in writing, while spoken "in the oral-aural culture [words] are



4.02 - Invitation for the *in progress presentation*, 14.09.2018, m.jaekel.

inseparable from action for they are always sound” (Ong, 2000: 112–113). Sound and its way of traveling in waves, which interfere and can be interfered, became a crucial aspect within my performative presentations.

Breaking the normative in performative presentations is also expressed in inviting movement practitioners from different backgrounds. This included forms of street dance like Hip Hop, Breakdance (b-boying/b-girling), as well as Parkour and contemporary dance by considering the unique knowledge contribution each bring in their embodied abilities. Some of these movement forms already draw on non-central stage settings, as Parkour, which uses the city- or landscape scenario (see chapter 3). Practices in Hip Hop and Breakdance provide a ‘stage’ by having non-dancing participants and onlookers form a circle for the performers in the streets. In my own practice of artistic performance site- or situation-specific context, and possible audience participation were always preferred to a stage-like scenario. The consideration to break up a central viewpoint, marking a second important aspect, is intrinsic to the chosen performative aspects and method. Yet, situations occur, for example, when invited to a conference lecture setting that request to deal with a set-up oriented towards the central view. In these situations, either my collaborators or I walk off the frontal position and try to create a more complex situation out of our actions. However, to establish some sort of framing that demarcates the area of performance is a crucial task (see the grid layout for the Ambika P3 performance in March 2019). This un/doing may happen by de-centralizing it or by breaking the ‘fourth wall’⁷ as it is addressed in theatre studies.

This intention to break a predefined point of view includes to counter the argumentation of a selected perspective claimed as universal. Referring back to Barad’s theoretical framework the assumption of an achievable general objectivity is countered by Agential Realism’s



4.03 - Performance - *in progress presentation*, at Deep End, University of Westminster, 14.09.2018 with Rafik Hamdani, Param Mirpuri, Maieuran Sathanantan and monika Jaeckel, image: stills from documentation / m.jaeckel.

⁷ The ‘fourth wall’ is a convention in theatre performances to accept the illusion of a fourth (invisible) wall towards the audience. While the visitors can look on, the actors pretend to be in ‘public solitude’ (Stanislavski). The ‘fourth wall’ is an established practice especially in modern realistic theatre, popular especially in the 19th century. ‘Breaking the fourth wall’ is a metareferential act that breaks this illusionist barrier, an act that also can occur in film settings or literature. (https://en.wikipedia.org/wiki/Fourth_wall [accessed: 20.08.2020]).

contextualised objectivity as *exteriority-within-phenomena*. The essential tool in differentiating things here is the *agential cut* of cutting together/apart that produces a relational objectivity. Barad, by approaching a situation through the frame of an apparatus setting, that basically defines the general ‘laboratory’ or experimental collocation, provides a structure to re-establish a certain ‘exteriority-within’. Each constellation is always intermingled with its particular conditions (apparatus) defining the outcome (phenomena) for a specific way to look at something as *exteriority-within*. Therefore leaving space for different perspectives that contribute to meaning – a sort of perspectivism that is multi-fold and non-linear and provides a pathway towards perspectivism in Amerindian thought (Castro, 1998; Vanzolini and Cesarino, 2014).

In the presentation of *signalling - at a molecular level*, which took place throughout the HYPHEN exhibition in March 2019, the attempt was made to deal with the task of perspectivism intending to break up perspectival representation. Throughout the performance presentation some of the dancers were equipped with body-cameras to contribute documentary material from multi-perspectival views. In the editing process the handheld camera by the dancer and media artist Lene Vollhardt provides the main top image, footage from GoPro cameras and a fixed camcorder contribute material that is displayed in the bottom row of split images. More detail on the documentation process will follow.



4.04 - Performance: *signalling – at the molecular level*, at Ambika P3, University of Westminster, 22.03.2019.

Image: stills from documentation edited by m.jaeckel. Top: handheld camera by Lene Vollhardt. Bottom row: left: GoPro as body cam. Centre: camcorder in fixed position. Right: GoPro as body cam.

4.4 Space – the grid as place

As laid out for specifics in the developmental process the intention to find correlation between practice and the grounding ideas was attempted in the details of the set-up, the performing and also the documentation. The importance of spatial relation ought to be realised through the intra-action of movement practitioners from distinct fields. A known fact among some dancers and philosophers is that movement initiates and creates space (Noë in Gehm, 2008; Philippopoulos-Mihalopoulos, 2015), thus each participant was to access and

activate space according to their specific awareness and abilities. While the Parkour/ADD practitioners turned towards the architectural structure based on their sense of intra-active engagement with the environment, the focus of the dancers was on space itself and their motion creating it. Quite literally unfolding as “corporeal matter [...] taking up forms that are codetermined with this very space”. Space for Philippopoulos-Mihalopoulos is enacted in repeated place-taking actions, “every time as the first time, every time once, unpredictably” (2015: 48, 52). As such the presentation was thought to activate the Ambika P3⁸ gallery while highlighting aspects of situatedness and its bound intertwinement. The latter was further emphasised by the occurring interference patterns of electromagnetic waves were intended to be amplified through the practitioner's engagement with several e-textile pieces. These pieces from Gabriela Guasti Rocha's INTUERI collection will be explained in the next section.

The concept of the *signalling – at the molecular level* presentation itself was based on the diffraction of quite distinct ideas. Each part, performers, site, timing and the sound/noise transmission in the massive space of Ambika P3, would be influencing how the piece comes together. Yet in a performance not everything can be predefined and often things just fall in place (or not) when being enacted in space and time. This quite generally demands to be reactive, in the sense of responsiveness, in and to the situation.

One of the decisions developing in the process was how to mark the area where the main part of the performance should take place. In Ambika P3's huge post-industrial, mostly untouched, and thus undivided space, the spot allocated to the *signalling – at the molecular level* performance had been chosen to be underneath a metal staircase in regards of possible use by the ADD practitioners. The INTUERI objects, laid out on the yellow grid at the beginning of the performance, were also present as ‘artefacts of the future’ throughout the entire HYPHEN show. Gabriela Guasti Rocha's indication towards future relevance in this sense



4.05 - Top: view from gallery entrance into Ambika P3 at *Hyphen Exposition*, below: posters – description and timetable, images: Reka Komoli, March 2019.

⁸ Ambika P3 is a “distinctive space for contemporary art and architecture which presents a public programme of solo and group exhibitions, education projects, talks and events”. (<https://www.westminster.ac.uk/about-us/visit-us/ambika-p3>), [accessed 20.08.2020].

could be interpreted as to indicate a future geological stratum. The grid⁹ as a marker of a possible future excavation site, was laid out on the concrete floor by tape to temporarily mark our exhibition space and the main performing area for *signalling – at the molecular level*.



4.06 - View with staircase – *INTUERI* pieces by Gabriela Guasti Rocha, 2019, image: m.jaeckel.

4.5 INTUERI

The above mentioned cloth pieces from the *INTUERI* collection by interface designer Gabriela Guasti Rocha were originally developed as soma-sensory fashion pieces to increase awareness to environmental components by conducting vibrations through a bone-transmitter onto the wearer's skin.¹⁰ Rocha had interwoven the fabric with copper wires, which again were connected to implemented transmitting devices. Having read about Rocha's work in a Berlin city magazine in December (Kavanaugh, 2017) I was interested in her ideas of responsiveness. In a first meeting the following summer we realised an overlapping interest in the intention to make something imperceptible sensible.¹¹ However the *INTUERI* pieces initially were designed for an individual perception, while for an eventual performance piece the idea was to amplify possible interference patterns to an audible level for dancers and audience. As the copper wires would pick up any electromagnetic waves (including mobile phones) in the room the idea also came with a few challenges as how to allow a hindereance-free acting and moving for the presenters. Finally resolved by being supplemented with bluetooth transmission systems connecting to a PA system the *INTUERI* pieces



4.07 - Installation with *INTUERI* piece by Gabriela Guasti Rocha, Hyphen Show, Ambika P3, March 2019, image: m.jaeckel.

⁹ with thanks to the external advisor F.Armaly.

¹⁰ Gabriela Guasti Rocha, originally from Brazil, earned a degree in fashion design at the UDK Berlin. (<https://design.udk-berlin.de/2018/11/gabriela-guasti-rocha/> [accessed: 20.08.2020].

¹¹ First meeting 18.07.2018: Explaining my project's concern at this point as attention towards embodied knowledge / live experience in relation to movement aiming to create awareness for other forms of expressions as those in and of animals, plants, stones, etc. That drew relation also to other ways of thinking / moving eventually even caused by physical, social or environmental constraint thus leading to a sharpened, yet unacknowledged ability. In my understanding this interrelated with Rocha's interest in indigenous artefacts (Peru, Columbia, Ecuador, Bolivia) that influenced the design of her *INTUERI* pieces. Her months-long research into indigenous weaving patterns had not only informed the design of the fashion pieces, but also some ideas behind them. Rocha's concern with the *INTUERI* collection referred to modern technologies "invisible world", which is omnipresent around us. Her intent was to reconnect to "the body, senses on the skin" by making technologies sensible. The transference of electromagnetic wave signals through "the copper embroidery" into vibrations was to become "aware of the energy that surrounds us". The "function of *INTUERI* [is] to reveal the unravelled". (UDK Berlin; <https://design.udk-berlin.de/2018/11/gabriela-guasti-rocha/> [accessed: 02.02.21])

developed a life of their own by picking-up and transmitting electro-magnetic waves from the environment and its ongoing intra-action.

This ‘life of their own’ can be understood quite literally as the concept of the INTUERI pieces was to transmit the electromagnetic field waves without any preselecting intention. While theoretically in line with the conception, this meant that the actions of the movers would increase the emerging sound yet did not provide them with options of influence or control. As electromagnetic waves are sent out by many devices like mobile telephones the audience therefore unconsciously contributed to the incited noise and turned it into a ‘response’ that escaped human control. Thus, in making the interferences audible and establishing the ‘sound to dance to’ especially the dancers experienced a challenging work in this new sense of unpredictability.



4.08 - INTUERI by Gabriela Guasti Rocha. Left: after presentation at PARSE 2019, Gothenburg. Right: testing sound transmission March 2019, images: m.jaeckel.

For the involved practitioners this ‘sound to dance to’ demanded an ability to interact with abstract sound. Not an easy task for the rhythm-oriented dancers from the Hip Hop and b-boy-/girling scene, with whom I had engaged earlier on. The project therefore needed movers trained in contemporary styles, able to find their own rhythms in dance. Yet, also practitioners from the Parkour community would be able to deal, as they train to city sounds, which commonly is considered noise. In December 2018 under Rocha’s guidance a provisionally wired INTUERI piece of was tested with the help of the befriended dancer Evangelia Papadopoulou in Berlin. It was an exploration into which sounds would become audible, and what moves become possible with those technically enhanced and thus sensitive costumes. While the copper wires sensitively picked up any interference with electromagnetic waves, the costumes exposed a fragility in the delicate fabric and thus restrictions for the performers’ movements.



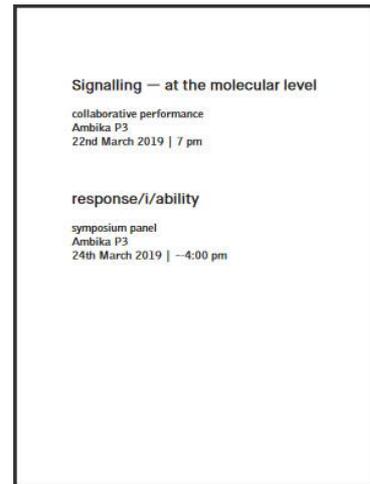
4.09 Rehearsal: testing INTUERI with Gabriela Guasti Rocha and Evangelia Papadopoulou, Theaterhaus Mitte, Berlin, Dec. 2018, image: m.jaeckel.

4.6 Process of rehearsal – the object as process

To return to the conception of the performance piece the unpredictable interaction-sounds by the INTUERI pieces provided an equivalent metaphorical meaning of molecular signalling. Emphasising movement's ever-different emergence and iteratively unfolding situation the dancers' interactions with these costume pieces thus translated, usually for humans imperceptible transmissions into audible noise, which always also is sound. In such the immanent resonance in body – environment intra-actions was underscored accentuating that interferences are unavoidable. As mentioned by making something perceptible or audible it must be acknowledged (or wilfully neglected). Whether that be through emphasis, awareness, or, as in this case, a technological device system, an ethical implication is always co-created. The realisation of being affected demands a response and a change in the known ability (routine) to respond (Rose, 2013: 11–18). Transformed into the three-fold quest of *response/i/ability* this insight was foundational for the piece, and also became the guiding theme of the accompanying symposium panel.

Before extending on the accompanying event at the symposium a few more processes in the development of the performative presentation had to be passed. Right from start the team of collaborators was oriented towards diversity, yet also grew in number beyond the planned. In terms of performing in the huge post-industrial of Ambika P3 a larger group made sense, though was a challenge for the organisation. The team consisted of the three dance artists Giulia Iurza, Gloria Trola and Livia Massarelli, the contemporary and ballroom trained dancer Tom Wohlfahrt, Francis Maskens as contemporary dancer with experience in Hip Hop and the two ADD practitioners and coaches, the athlete Georgia Munroe and Louiseanne Wong, who also trained as dancer.

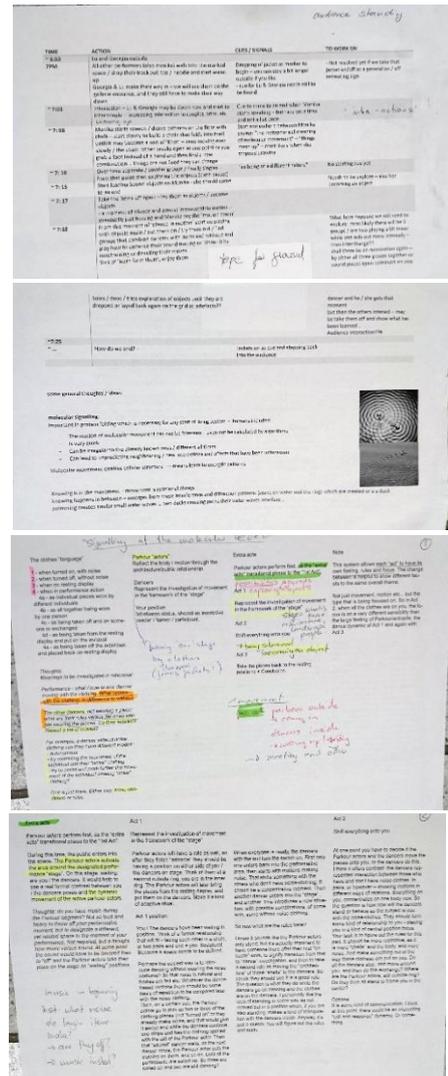
Early February 2019 rehearsal started in a professional studio in Camden, London, where we gathered to learn think and move as a group. After some playful intra-actions and knowledge exchange, it became clear that my conception for the choreography of the dancers' interaction, needed to be reworked. The process was complicated by the fact that, we had to



4.10 - Leaflet for the combined events for *signalling - at the molecular level*, March 2019, Ambika P3 Gallery, m.jaeckel.

rehears without the INTUERI pieces, as they still were in modification for wireless connectivity. All movement collaborators were open for experimentation turning learning into a mutual exchange. Each of the participants brought their unique and diverse experiences from choreographed pieces, to improvising techniques, performing in art exhibitions, same-sex ballroom dance competitions and the cityscape interactions of the ADD practitioners. Planning to interact with the site (ADD), while enacting from a situated stage creation (Hip Hop), on the basis of improvisation, we realized we needed a narrative and not just an action script¹² as common in artistic-based performance practice. Regarding my own process of learning or breaking up of accustomed patterns it needed realising how just reading and conceptualizing theoretically, even if unconventional, narrows the mind for thinking through other forms of communication. Bringing these ‘other forms’ to physical awareness, as by accentuating them in action, turns it into a whole different process of which unpredictability is always part. In “Against Ordinary Language”, Kathy Acker names to be permitted to glimpse physical measures means to encounter what cannot be controlled as those “laws that control my body, those of change or chance, laws that are barely, if at all, knowable” (1993: 26).

Humans, non-humans, as any other matter always respond – are you ready to listen, to decipher, and prepared to accept not immediately to understand? Can that moment of being in the air, that freedom of jumping be held, be used as momentum? Are you ready to risk a cat leap? This is not only a reference to my early kitten example, and my poorly executed ADD leaping, but understood as a literal term. The Kong vault in Parkour/ADD is a jump that



4.11 - Working sheets for rehearsal and performance development. Top: first ideas on cues and action. Below: 2 pages from rethinking process, m.jaekel, January - March 2019.

¹² In earlier artistic performance actions I often had only outlined the scenario together with the major steps of consequent actions. In between spaces remained purposefully open remained for audience interaction evolving by acting out of the midst of a given situation like a show opening. For the *signalling – at the molecular level* performance as working with dancers, who are often used to act by given tasks and a strict choreography both had to be defined: a dramaturgy along which to perform – with space for improvisation.

propels the body through the arms with the surprise of landing beyond. As much as failing is part of the process, in landing a fault can be painful or even fatal. But that momentum of leaping is also a chance to reach unknown grounds.



4.12 - Rehearsal at Ambika P3 Marylebone, London March 2019, image: m.jaeckel.

One of these surprising leaps in the process of developing the piece was the decision towards a more democratic handling of the cloth pieces. In the week before the performance we received three INTUERI pieces, all rather small in size and only fitting the smaller dancers. The decision rather than assigning the costume pieces to specific persons to handle them object-like transformed their status into things that made sound in intra-actions, by either being worn, or played with. The step also demanded a general wardrobe replacement, including the handling of possible changing procedures on stage. Pleated trousers for all, thin enough to eventually have the costume pieces pulled over, and T-shirts with molecular prints, similar to those in the *in-progress presentation* marked who was a performing participant. Included in the wardrobe, as well as set was the media artist and trained dancer Lene Vollhardt, filming while dancing with a handheld DSLR camera.

Returning the e-textiles at least partially to their status as thing crucially accentuated their impact on the process. The disassociation of the costume pieces from sole human enactment, which would have been associated when worn



4.13 - Test sheet for wardrobe combinations including the three available INTUERI pieces, February/March 201,9 drawings and image: m.jaeckel.

throughout the performance, enabled the INTUERI pieces to become identified as self-standing objects. Transmitting interference noise also when laying in place. This did not mean that human interactive contribution, however reduced, in enabling them through technological wiring, was effaced. Rather than to neglect or suppress human agency, it is interpreted as a doing-being that invigorates responses in the sense of Barad. Not as a one-sided ability to act but the induction of change in the incited interplay of responses. Acknowledgement's intrinsic ethics, evoked by becoming perceivable and audible, demands for responsibility and subsequent changes in the ability to respond (Barad, 2007; Rose, 2013).

This complexity and relationality surrounding the notion of response will be addressed in the threefold expression of *response/i/ability*, which was specified in a self-organised symposium panel with the same title.

In becoming actants the INTUERI pieces furthered the realisation of their role as object by being interrelated to the one of the supposed human subject/object. Rather than for a one-sided action the aim was to evoke both sides as mutually affected. In this sense the human ‘help’ to bring



4.14 - *signalling – at the molecular level* installation with INTUERI pieces by Gabriela Guasti Rocha, March 2019, image: m.jaekkel.

something forward was indeed based on interference. Yet, as a facilitating it cannot be classified in a dichotomous way of black and white, good or bad, but rather needs listening, analysing, and consequent action and/or adaptation. An action may equally be incited by necessary decrease of a certain input, habit, or movement. The objects needed ‘help’ (amplification), but also moved the performers bringing forward an ambivalence that often is entailed in human intra-action. This may not just be in terms of the environment, but also in the attempts of veiling negative effects of exclusion or fostered adaptation for certain humans or non-humans. In a sort of congruence to the findings in the third chapter also the handling with objects allowed to state that by interacting or adapting towards them a normative claim cannot be made. Relating this to the insight that habituation forces assimilation as the negative imprint of a routine points at the missing dialogue.

The performance tried to express communication with the environment by either the in- or decrease of interference patterns. Rather than following a noticeable structure any electromagnetic waves in the room (including those of the audience) were picked up and contributed nuances of a multi-layered environment becoming transmitted and expressed



4.15 - Giulia Iurza and Francis Maskens with the INTUERI trousers, image: film still - footage by Yao Gogoly, recorded throughout the performance 22nd March 2019.

through the sounds of the cloth pieces. The INTUERI pieces in their status as ‘things’ became in an intra-active scenario. As such the ‘becoming one’ with, or the realising to be part of an acting entity composed by the multiple objects/subjects, that were involved, allowed realizing that it as a mutual process.

4.7 Movement as noise

The point of processual development not just occurred throughout the rehearsal period but was considered a general essential performative element. In the performance presentation the ADD/Parkour practitioners' task to welcome the audience by guiding them along the outside pathway into the space was a rather literal transposition of the insight that space is understood as being activated by action. Georgia and Louiseanne, the assigned ADD initiators, would start interfering the inside group's slow warming up when entering the main space. The over the yellow grid spread-out INTUERI pieces, albeit not yet being taken up, moved, or worn, had already started to respond to the action in the room. By starting to slowly reach towards the objects and the other performers intra-action initiated throughout my speech of the performative text. The unpredictable noise/sound of the e-textiles contributed another level of sound onto the one of human speech. Considered as equivalent, these sounds overlaid what is regarded as intellectual knowledge contribution.



4.16 - Top: first/second image - storyline with colour marking; third image: timeline with colour marking and explanations what each marking signifies for: movement, speech, and sound; sketches by m.jaeckel from the rehearsal process for *signalling – at the molecular level*, 2019.

As described the electromagnetic waves pick-up was transmitted through the interwoven wires and further amplified as signals into audible as noise/sound into the gallery space. The transcoding of movement, precisely its interferences caused by affectivity, became a reaction of the environment transferred into an increasing oscillation of noise. By turning into initiating parts of the performative process the cloth pieces disclosed their own processual character. They no longer could be handled as items that were solely incited by humans, but rather became subjects of matter, things that speak, and objects to listen to. Very obviously mattering, and disclosing their contribution in creating meaning this developmental process fostered a story line providing cues for movement improvisation. The objects' influence on

the recitation of the performative text augmented in the climax of noise/sound became equivalent to the length of my speech. In this flow the dancers had gained obvious support through movement noise, which turned them into companions of the INTUERI pieces. In a combined move to eventually cancel out my words as the dominant communication, they accumulated all costume pieces onto my back. This became the metaphorical sign that the overpowering speaking voice was no longer the only valid one, shifting the performance towards movement/noise (doing/being) intra-actions of affecting and being affected.

Co-working was a crucial aspect for the entire process to affirm the different forms of knowledge each contributor and participating piece brought with them. Nevertheless, there is a certain tension around collaborating in a PhD project, as contributions of collaborators were under the directive constraint to follow the theme pre-



4.17 - INTUERI arm piece by Gabriela Guasti Rocha on yellow grid, March 2019, image: m.jaeckel.

defined by me. The original idea of collaboration, while thought to grant space and recognition to the aspects each single participating object/subject contributed, finally had to be changed into co-operation. While the project came together on my invitation and conception, without any of the participants and their willingness to listen to and deal with the process the outcome would have been a very different one. Especially Gabriela Guasti Rocha's co-operation for the lending and modification of the costumes, but equally the dancers' great curiosity when dealing with unknown situations were invaluable. I am grateful for their enthusiastic intermingling with practitioners from other fields, and their patience to deal with me, as someone who does not come from a dance-specific background. Indeed, looking back a lot of mutual learning and influencing happened, much of it based on an openness to react.

The performance right from the start had been conceived as a stand-alone presentation. Moving away from presenting based on a paper in academic style first had been tested in the September 2018 in-progress performance. It had been conceived around a performative writing text, which in a slightly different version had been published in the inaugural issue of Hyphen Journal. The journal had been conceptualised as being open to contributions in an experimental practice-based and research-oriented style which intrigued me as a chance. The

introduction of an independent editing process yet created requests to keep closer to an academic style, which led to some alterations compared to the finally performed text. Albeit taking care in the text's accuracy, the purpose was to avoid a rather abstract and theoretical style, aiming to write fluidly. I consider such attitude as appropriate for the gap artistic research tries to bridge. Yet, while less acknowledged writing styles contribute to the openness creative research aims to provide, it creates a problem for academic/scientific acceptance. Meanwhile performative formats while more likely to be accepted in public, but to be invited to a conference often still demands an application with abstract and paper in academic style. However, the performance has been presented at some conferences in a concise performative version with two dancers.



4.18 - One of several conference presentations: *On signalling - at the molecular level* - dancer Paola Drera interacting with audience at *Borderlines VII* conference at de Montfort University, June 2019, image: m.jaeckel.



4.19 - Discussion after presentation at PARSE Biennale in Gothenburg, Sweden, November 2019. From left : Giulia Iurza, Gloria Trolla, monika jaeckel, Gabriela Guasti Rocha, image: m.jaeckel.

4.8 The presentations

The events – performance and symposium:

In course of the *Hyphen Exposition* my project had been scheduled with two events:

- 22nd March 2019 the *signalling – at the molecular level* performance
- 24th March 2019 the *response/i/ability* panel at the HYPHEN symposium

The performance piece included the amplified INTUERI (2018/19) e-textiles by the interface designer Gabriela Guasti Rocha, as well as the collaborating dancers Giulia Iurza, Livia Massarelli, Francis Maskens, Gloria Trolla, Tom Wohlfahrt, and the Art du Déplacement and Parkour practitioners Georgia Munroe and Louiseanne Wong.



4.20 - Big INTUERI piece on plinth, Brochure announcing both events and detailed panel description, March 2019, image: m.jaeckel.

It was announced as following: As with any other space, when entered, Ambika P3 becomes

tangible in its relation and affectivity to both time and mattering. During the performance, the visible and audible specifics of the site become experiential through the diffraction of words and movement, intellect, and sense, into contiguity. Throughout and beyond this text, movement practitioners engage with each other and the room, each from their perspective. Wearing e-textiles by the designer Gabriela Guasti Rocha, the performers will bring forward a normally imperceptible acoustic layer when moving through the space. Fitted with wireless transmitters, these costumes pick up buzzing sounds that are elicited by the interference of motion. The combination of these noises sparked by movement, together with speech, aims to underscore that thought and action emerge in their interference with the layers and diffractions of their surroundings. The unanticipated, simultaneous surfacing of various forms of knowing (in moving, speaking, listening) addresses motion as multi-layered. It levels this processual interweaving of what is commonly understood as antagonistic—theory and practice, body and mind, self and other—towards an interpretation of complementarity.¹³

- *Signalling – at the molecular level* included seven movement participants and four pieces of e-textiles, performed at Ambika P3, accompanied by a performative text, which also was published in the *Hyphen Journal*.



4.21 - Stills from footage by Yao Gogoly (co-founder of ADD *Esprit Concrete*) shooting *signalling – at the molecular level* on 22nd March 2019.

- *On signalling – at a molecular level*, a slimmed and modified version of the performative presentation usually included two dancers and one or two of the INTUERI pieces.¹⁴

These presentations were shown at the ADiE conference *PerForming Futures* at Middlesex University (04/2019)¹⁵, at *Research Matters* at University of Westminster (06/2019), at *Borderlines VII* at de Montfort University (06/2019).¹⁶ The last presentation was given at the

¹³ See exposition website: http://www.hy-phen.space/exposition/monika_jaeckel/ [accessed: 17.09.2019]

¹⁴ Presentations with the two dancers Giulia Iurza and Gloria Trolla (substitute: Paola Drera) were in April 2019 at *Artistic Doctorates Per/Forming Futures* at Middlesex University, in June 2019 at *Research Matters* at University of Westminster, and at *Borderlines VII* at de Montfort University. A presentation with also Gabriela G. Rocha present took place in November 2019 at *3rd Biennial PARSE Research Conference – human* – in Gothenburg, Sweden.

¹⁵ <https://www.artisticdoctorates.com/2019/07/29/per-forming-futures/> [accessed: 19.09.2019].

¹⁶ <https://www.facebook.com/events/2185347085062994/> [accessed: 19.09.2019].

Biennial PARSE Research Conference *Human* at the University of Gothenburg, Sweden, in November 2019¹⁷, with the designer of the e-textiles, Gabriela G. Rocha, present.



4.22 - Left to right: still from *PerForming Futures* at Middlesex University (dancer: Giulia Iurza, Gloria Trolle), still from footage by Cassie Lin from *Research Matters* at University of Westminster (dancer: Giulia Iurza, Gloria Trolle), still from *Borderlines VII* at de Montfort University (dancer: Giulia Iurza, Paola Drera), April - June 2019. Camera: left and right: m.jaeckel; centre: Cassie Lin.

4.9 Symposium panel: *response/i/ability*

The simultaneous symposium inaugurating the HYPHEN journal, a “student-led online journal for showing arts, media and communication research”¹⁸ of CREAM and CAMRI researchers at the University of Westminster offered the opportunity to present for the involved artists. Providing a chance to emphasise, question and widen the insights which were posed by the performance work I organised a panel under the keyword *response/i/ability*.¹⁹ Three invited panellists, the artist and researcher Kat Austen,²⁰ the co-operating designer Gabriel Guasti Rocha, and the *Esprit Concrete* co-founder Kasturi Torchia²¹, were asked to contextualise their work in relation to this notion. The intention was to provide insight into the connections I had drawn to their work.

The earlier chapter has shown that, when it comes to the physical act of movement in humans, I am mostly interested in those activities, which interact with the environment (ADD/Parkour) or have a certain consciousness for the activation of space through their activities (dance). Since summer 2018, when first encountering the specific method of the London based ADD group *Esprit Concrete*, I participated in their weekly sessions. Teaching a vmethod that is closely routed in the original Yamakasi²² style especially Kasturi Torchia had started to intertwine her studies in psychology and personal development with the art of

¹⁷ <https://parsejournal.com/event/human/> [accessed: 19.09.2019].

¹⁸ The announcement of the event can be found here: <http://www.hy-phen.space/exposition/symposium/>; The journal is online under: <http://hy-phen.space/journal/> [accessed: 20.08.2020]

¹⁹ *response/i/ability* panel at the Hyphen symposium: <http://www.hy-phen.space/exposition/response-ability/> [accessed: 20.08.2020].

²⁰ <https://katausten.wordpress.com/> [accessed: 14.04.2020]

²¹ <https://espritconcrete.com/> [accessed: 14.04.2020]

²² <https://en.wikipedia.org/wiki/Yamakasi> [accessed: 19.09.2019]

jumping. Meanwhile officially developed as the Esprit Concrete Method, the method's interdisciplinary approach corresponded with my own interests and opened a fascinating route into ADD/Parkour. While part of my self-defined reasearch practices, the *Esprit Concrete* sessions became a real adventure in exploring own blockages, constraints, and possibilities. Coming to ADD above the average practitioner's age²³, however, I never was sure if my interpretations would overdetermine certain aspects. Therefore, I really appreciated Torchia's commitment and valued to hear her aspects on *response/i/ability*.



4.23 - Georgia Munroe jumps throughout Kasturi Torchia's talk at the Hyphen symposium "Gaining or losing – How do we really meet, greet and overcome the obstacle?", March 2019, camera: Lene Vollhardt.

Gabriela Guasti Rocha, as an involved co-producer, gave an introduction on the background and development of her INTUERI pieces. These exquisite pieces were originally designed as fashion items that combined new technologies with patterns and ways of connection making and storytelling that was deeply rooted in the south American continent. Ancient weaving patterns Rocha had researched in her home country Brazil and neighbouring places were interlaced with thin copper wires, which then by being amplified allowed to transmit interference patterns in electro-magnetic waves from the environment. Rocha combined unique sewing patterns transferred from Amerindian indigenous artefacts with common denim to emphasise an awareness for the extraordinary in the common. Living and studying in Germany, Rocha's inspiration was the idea that "ancient desires and senses remembered by the use of technology making us aware of our new environments".²⁴ Her intention to address



4.24 - INTUERI piece by Gabriela Guasti Rocha, studio session, 25th March 2019, camera: Lene Vollhardt.



4.25 – Detail copper wires in INTUERI piece by Gabriela Guasti Rocha, image: m.jaeckel.

²³ Yet, I was not the only one 'above age', as *Esprit Concrete* among many other points, highly encourages diversity in any direction.

²⁴ Cited from the UDK website: <https://design.udk-berlin.de/2018/11/gabriela-guasti-rocha/> [accessed: 14.04.2020]

influences that cannot be seen, but only felt intersected with my idea of making imperceptible audible.

Kat Austen²⁵, an artist, who also holds a PhD in Chemistry, had been invited after I had attended one of her talks at Siobhan Davis Studios in London. Special interest emerged due to her research in the arctic by making the melting of ice into water heard. Austen defines her method as hacking “the electronics of lab equipment to transform



4.26 – Kat Austen doing sonic research for *The Matter of the Soul*, 2018, image: Kat Austen.

them into musical instruments that play the sounds of melting ice” (2018). Her recordings, however, do not directly represent values of the measurements, she rather draws them “from what happens inside the machines during the process of measurement”. In this her approach resonated with my ideas to abstract and metaphorically transform amplifications of sound. Austen merges “artistic and scientific methods of encountering the world” to make sounds for her musical compositions (2018). Her work attempts to translate the gap that scientific research alone cannot bridge, into something that creates an awareness for things barely perceived. Her talk was announced as “[p]robing unheard voices of an ecosystem: how empathy and experience can guide us to climate action” to address the “connectedness of the self to other(s) and the role of affect and experience in this”.²⁶

All three talks connected to different aspects of the project and intended to highlight these: interaction, space creation/activation, unperceived connectivity, as also the non-hearing of ‘other voices’.

While it was my intention to create collaborative work arrangements within the project, the frame of the PhD that was enforced by my set theme, it remained in parts an individualistic undertaking. This caused a tenuous situation I had not considered in the beginning. Yet the attempt to include all co-workers on an eye level was accrued on the basis that each of their contributions enabled something that I alone would never have been able to create. Further, I saw opportunities in the scenario, provided by a certain freedom that research offers, but as known that may include the result of failure. Research means for me to cross or at least shift

²⁵ <https://www.spri.cam.ac.uk/friends/artistinresidence/artists/austen/>; <https://katausten.wordpress.com/the-matter-of-the-soul/> [both addresses accessed: 19.09.2019].

²⁶ From the panel announcement – see “response/i/ability” booklet.

boundaries, which can lead to a non-desired outcome. Routes throughout the project were changed by each single contribution, as well as by the opportunities which opened or closed through our joint actions. It was my role to ‘keep the eye on the prey’, to contribute through the uncommon means of artistic labour to not yet defined insights. While eventually attributed I refused the role of a choreographer as such a position put me too much into a directive role which contradicted the impulse of research. My aim was not to create a certain dance piece, but rather to engage in a process of mutual learning and intra-action and then engage with the subsequent development.

Certainly, my guidance for the dancers throughout the project was unconventional. Not every presentation was flawless, and we encountered technical issues unless we were able to work with professional help. But it has been an amazing process of learning from and with all participants, which, as expressed especially by the dancers Giulia and Gloria, includes as partner what is commonly called a thing or ‘object’. In discovering aspects of intra-action an almost literal ‘learning from’ and ‘becoming with’ occurred.

4.10 Concluding: agency’s trouble

While I would not have been against replaying the piece as common in the dance community, it generally was conceived as research and thus would potentially be modified. Commonly in dance tradition pieces are likely to be re-performed, in performance art, yet, a laboratory understanding prevails that explores experiments in consciousness (Phelan, 2004: 571). It is the recent approximation between both fields, that drew me close, but my intention was to neither stick to any normative restrictions, as would be for dance to possibly have a stage and for performance to just present once. The outcome had been interesting, as pointed out, some of the experiences reported by the participants were close to theoretical propitiations but had not been indicated prior. This might be considered aspects of ‘shared agency’ following Barad’s intra-active doing-being, as the entailed complexity in mutual becoming. However, it is never a totally balanced one, especially when ‘we-humans’ are involved, who too easily be tempted to shift back into dichotomous patterns by rather drawing from than offering response-abilities.

The problem of agency had been registered as an essential point for my work that barely could be addressed in its entire complexity. It took some experiments to realise the persistent tendency to invert trained habits into its oppositions rather than going through the

effort of substantial change. Throughout this project enacting such problems through minor knowledge, like the tacit one of movement, hinted at these overlooked aspects. Agency shared cannot mean to shift or abandon its implications towards the other involved factors on a basis that it 'is like that'. This crucially abandons the ethical before it consciously being noticed. Ethics according to Deborah Bird Rose have a participatory quality, based on action rather than rules, the ethics of connectivity "are open, uncertain, attentive, participatory, contingent." (2013: 141–143).

New materialisms emphasis on intra-action with and in response through matter(ing) is tied to an inherent ethics that come by listening or perceiving something formerly neglected, overlooked, or regarded as non-perceivable. This complex theme needs to be carefully reviewed to not allow for new materialist-oriented thinking to become an escape route for fatalist progressionist thought in the sense of 'we do not have any agency'. A point that in juxtaposition of technological omnipotence already came and still comes up in certain contexts regarding the technological developments of AI.²⁷ What has been addressed as solely human agency also needs to be examined in regards of its negativity, as that what has been excluded or neglected its response. Crucial are always both, the in- as well as exclusions, which are made in any *exteriority-within-phenomena*.

The questions gained from here then are how to shift our reaction towards the middle-ground, the in-between, where it becomes an active listening? No response is final, it always raises again and needs to be responded to anew. The demand to be aware to what we perceive, when sound and noise reach our conscious level, indeed means to listen. There is further the need for the urgent insight that by declaring oneself as passive, denying own contribution to responses, is the same as ignoring. It already constitutes a response and cannot be explained as 'overhearing'.

²⁷ The so-called winters of AI (https://en.wikipedia.org/wiki/History_of_artificial_intelligence; [accessed: 20.08.2020] aside too high ambitions, had funding problems. Later gained progress showed an approach limited to "symbol processing", which early critics like H. Dreyfus identified as not substitute human reasoning alone. Reconnecting to the late 1970s 'connectionism' and the integration of situated (embedded) and embodied approaches in cognitive sciences allowed new progress. This revival in the 1990s, which was accompanied by developments in the philosophy of mind can be traced in B. Morgan's article "Situated Cognition and the Study of Culture: An Introduction (2017). The relatively new interdisciplinary field of 4E (embodied, embedded, enacted and extended) has "offered AI a way out of traditional computationalism" (Manzotti, 2019). The field is defined by several strands of philosophical approaches among them Shaun Gallagher, Mark Rowlands, Andy Clark, Mark Johnson, and many others.

5. Experiment in thought: *the after of the afterimage of agency*

The normative is the after-effect, it is a response to the irregular. (Moten, 2015)

The last chapter turns to the problem of agency and examines the dichotomous lingering of ‘after’ when applied as a redefining prefix. The problematic of a simplified flipping of agency into its opposite is already latent in the last performance piece. It shifted into the foreground by a conference invitation where I first reflected on this problematic by using the analogy of the afterimage. This chapter speculates on ‘after’ in a thought experiment of shifted in-and exclusions defining *teriority-within* on the backdrop of the actual Anthropocene / COVID-19 setting. Due to the pandemic conditions, it was written prior to the accompanying performance piece but had influence on and was informed back by the project. The recent completion of the post-production for the performance-turned-film, allows for a next and welcome opportunity to integrate further reflections.

5.1 ‘after’

Movement, even when being moved, at least within European Modernity, is commonly understood as a self-determined activity.¹ In a similar vein, exceptionalism’s route of thought considers subjects as makers and doers that develop, activate, educate, and manufacture (etc.) other humans, non-humans and things. Even predominant discourses on sustainability employ an engineering sense, where the human ‘expert’ addresses the issue not as “vulnerable, fleshy, or interconnected with material processes”, but as a rational, calculating entity constructing the world as onlooker (Alaimo, 2016: 32). While the climate crisis and the COVID-19 pandemic should have troubled these interpretations, such connotations continue to be encompassed in an understanding of agency that retains traits of modernist Universalism. Recent attempts to address the break in such modernist understanding, first caused by technological development and now environmental changes, frequently include interpretations of an ‘after’. The Anthropocene era is seen as rupturing the temporal understanding of modernity “as monolithic [...] thereby dividing its history in an arguably un-reflexive (pre-)modernity and a post-evental reflexive (post-)modernity” (Swyngedouw and Ernston, 2018: 9; 2019: 29). Recognizing the Anthropocene as the era "after the world" implies that human-centred "solutions" must be rejected due to “the inability to ever grasp

¹ Being moved through affective matter, which causes a change in the breathing rhythm or other ‘minor changes’ could also be discussed in the way that expressions like ‘I drive’ include being driven, while conducting. I am trying to address how in a western mindset centre position is claimed, which also becomes obvious in language.

the world as more than a 'continuous variation of variables'" (Chandler, 2020: 185-186).² The subsequent realization of being immersed in a "catastrophe-prone world" then establishes the modern subject as a "geological event" due to its destructive tendencies (Grove & Barnett, 2020: 107). This post-humanist proposition "for a radical post-anthropocentric position" is echoed in Braidotti's redisposition "of humans from mere biological to geological agents, calls for recompositions of both subjectivity and community" (2013; 2015: 13 -14). The approval of this long-neglected intertwinement, as Braidotti indicates, confronts contemporary action with an accumulated and steadily multiplying complexity. Leaving the shelter of the 'tamed' and subdued Nature, established for the protection from uncontrollable forces, that is offered by the bifurcating interpretation in universalist Modernity, necessitates uneasy movements.

In my reading, however, 'after' interpretations imply a shift within the accustomed parameters towards the oppositional. Inverting the logic of the earlier modern renditions, these offsets acquit the human from response-ibility rather than contextualising the position (Haraway, 1988). Indeed, approaches that attempt to bridge the nature-culture divide along multi-species, posthumanist and new materialist thinking have become prevalent. What is problematic in the re-creation of pivotal notions of modern understanding like nature or agency by the prefix 'after' is the missing critical posthumanist stance demarcating against transhumanist views. Furthermore, 'after' still operates in the logos of universalist Modernity's straightened time by providing an essential marker of differing from the prior, still adjunct to human intention. The Anthropocene is considered as that moment where human time folds with deep geological time (Grove and Chandler, 2017; Yusoff, 2018) yet encompasses as such both hubris and humiliating aspects. However, definitions that base conditions for an ontological turn mainly on the symmetry of forces, still provide the option for massaging the Earth system within an (eco-)modernist understanding of management propelling capitalist modernization by "an altered ontological premise" (Swyngedouw and Ernston, 2019: 29–31).

Posthumanism's critical stance thus demands the 'unframing' of the Vitruvian Man as an undoing of a modernist universalist self-understanding necessary as the foundation for other

² A world 'after the world', which would free (affirming) critical theorists "from the tainted baggage of modernist failures" (2020: 182), because they are now positioned in an 'after-phase' ('after the end of the world', 'after progress', 'after theory' or 'after critique').

“nomadic, embedded, embodied and technologically mediated subjects” (Braidotti, 2017-18: 39). To leave behind interpretations of a de-naturalised and fragmented social-cultural order is at the heart of Braidotti’s demand for a more complex understanding of environmental and organic foundations that form the “multi-layered interdependence between ‘naturecultures’ today” (2017-18: 43). Future Critical Posthumanities must acknowledge that the provided perspective is the messy midst of a materialist vitalism. Affirmative ethics therefore trace modes of relational subjectivity as “intertwined with the totality of things—including zoe/geo/techno ‘things’” (2017-18: 47) indicating a process of undoing oneness. A process that must precede Braidotti’s request to include those referred to as ‘missing people’. Creating the complex multiplicity for a non-unitary becoming based on “shared ethical passions for, and a social imaginary supportive of affirmative alternatives” (Braidotti, 2017-18: 42, 47) must be based “on the recognition that the “we” and the “us” are irrevocably fractured” (Ernstson and Swyngedouw, 2019: 42). As a result, 'after' must rework its own categorical understanding as integrative in terms of race, species, and mattering in relation to an oscillating background.

An ‘after’ acknowledgement that features such complex multiplicity as the connotative undoing of the notion of ‘Man’ that for both, Braidotti as Sylvia Wynter, are essential in reassembling and appropriately reworking humanities’ values, has not yet fully happened. Thus, interpretations of ‘after’ still stick to realms that are tainted by Modernity’s Universalisms in a similar vein, as discussions about the beginning of the Anthropocene. Modernist, universalist understanding remains deaf to the audible emergence of (emergency) signals of Anthropocene lessons. Despite catastrophic insights partly retrieved by machine enhanced reading possibilities (i.e. posthuman), an acknowledgement for the necessity of alternative perspectives of this multifaceted many-worlds world remains denied. Whether the beginning of the Anthropocene aims to be acknowledged with Industrialisation around 1900 or set to the mid-20th century due to the enforced accumulation of radioactivity in matter, geological and that of human bodies (Subramanian, 2019), these dates remain grounded on racist “epistemologies of life and nonlife” that prioritise a white biopolitics (Yusoff, 2018: 40). Supported by Silvia Wynter’s plantation-plot ambivalence³,

³ Originally described as plantation-plot dichotomy Wynter proposes a knowledge system that rejects the rules established by the profiting system. While plots were sometimes given to slaves „to nourish themselves and thus maximize profits—plots of land that also became the focus of resistance to the overriding system of the plantation economy” (McKittrick, 2013: 10).

Kathryn Yusoff's reading thus undermines the earliest dating from a European perspective (2018: 33–48). In the essay "Novel and History, Plot and Plantation" Wynter lists dichotomic generalisations that endorse her argument that with the discovery of the New World the process of "reduction of Man to Labour and of Nature to Land" had its large-scale beginning. From this moment on, Western Man saw 'himself' as "the lord and possessor of Nature.' The one-way transformation of Nature began" (1971: 99). Wynter's project pivots around uncoupling Man from the human and the idea of Humanity. By retrieving, as Braidotti had, the symbolic Vitruvian Man as the modeling drive of western Modernity's notion of humanity, Walter Mignolo discerns Wynter's desire to reveal the "imperial bend" that established European epistemic concepts as universal. Not aiming "to find the true and objective definition of "what is Human""", Wynter's project brought forward how declared definitions of objectivity and truth are imbued with racist and exclusionary definitions (Mignolo, 2015: 110).

Another exclusionary tool for epistemological conceptions in the constructing and conditioning of subjectivity is its alignment within chrononormativity,⁴ thus creating an "illusory unity [that] is built on the repression of difference" (Lanser, 1989: 435). Time has neither been unison nor linear, except in the narrative of progression in which universalist Modernity embedded itself. Defining time as 'disjoint' from nature, Deleuze points out, is for Kant interrelated with the scientific developments of his era (e.g. Newton). Time stripped off "all subordination to movement or nature" is unravelled and straightened. As a formal unit that, as "pure deployed form", constitutes an emptiness, that no longer relates to the world but stretches across it. Its "extreme importance for modern thought" as a constituting parameter emerges in substituting cyclical time by "a time as straight line, marked by a caesura, a caesura which distributes a non-symmetrical before and after" (Deleuze, 2020: 16, 17, 22). Preventing the falling together of before and after (2020: 23) man incited a time that now traverses the world's limits. In the above I can only provide a simplified understanding of the importance of the universalisation of time and its implied straightening. Yet, the conceptualisation of modern time is crucial for grasping time as the exemplifying marker it

⁴ Chrononormativity is a term introduced by E. Freeman: "naked flesh is bound into socially meaningful embodiment through temporal regulation: binding is what turns mere existence into a form of mastery in a process I'll refer to as *chrononormativity*, or the use of time to organize individual human bodies toward maximum productivity." (2010: 3) For Freeman chrononormativity is "a mode of implantation" of "hidden rhythms" enacted on the basis of schedules, calendars, time zones through which "institutional forces come to seem like somatic facts". These "forms of temporal experience" create assemblages of chronobiopolitics; a notion termed by Dana Luciano in *Arranging Grief*.

has become in the terminology of the Anthropocene. The Anthropos, operating in the time of Chronos, the sequential, is not considered in the Kairos, the 'critical' time, or time of break, which - as McKenzie Wark states - is the non-human time (2019). This again hints to the multifold of time, which is embedded in Barad's idea of hauntology, based on Derrida, as well as her newer expression of time encapsulated through Quantum Field Theory (2017, 2019).

A significant feature of the Anthropocene is the 'we' that, as Sarah Ahmed's analysis dissects, implements the exclusionary mode of universalist Modernity by inclusion (2012: 163).⁵ Such affirmation of the Anthropocene's inclusionary mode, however, extends the universalist claims of modernist thinking, as it ignores the everchanging non-sameness and consequent momentary cuts of in- and exclusions (in entanglements). The "socio-spatial matrix" is untied when categories are collapsed into an ontological frame, as in Ahmed's remark on incorporation, in the neglect of the Anthropocene's performativity (Ernstson and Swyngedouw, 2019: 38). Such generalising modes of depoliticisation ignore the situated interpretations of the iterative performativity of the world in its specific modes on in- and exclusion. The seemingly all-inclusive 'we' most obviously remains in the realm of universalising thinking modes by creating a bifurcating fracture within itself. Barad's manifestation of momentary 'apparatus' constellations is important for undoing in- or exclusionary establishments as fixed relations and achieves a certain meaning through an exclusionary set-up of *exteriority-within-phenomena* (2007). Meaning in this specific setting of complementary mattering is created in the twofold context of spacetime. If not neglected, exclusion provides for a moment of agential objectivity, however the excluded needs to be recognised in its momentary constitutive meaning as exterior. Eva Giraud (2019) has turned her focus towards neglected exclusions, as meaningful negative spaces that contribute to the realization of certain entangled realities, yet as 'veiled' or neglected connections, these remain unperceived. By shifting the emphasis towards such overlapping or contradicting folds, Giraud's ethics of exclusion concretises and problematises at which expense some entanglements are maintained. Thought patterns in the vein of time-based linearity generally oppress multidirectional layering, rendering them into seeming dichotomies, while in fact these events unfurl in relation to each other. Turning towards the 'after' as a freeing of the rubble on which it is built, thus foremost follows this one-directional move. To indeed allow

⁵ "To be included can thus be a way of sustaining and reproducing a politics of exclusion, where a life sentence for some is a death sentence for others." (Ahmed, 2012: 163)

an undoing or reinterpretation referencing 'after' demands to examine its multidirectional inheritance.

5.2 After's stratifications

History is not the past. It is the present.

We carry our history with us. We are our history. (Baldwin, 2011: 154)

From the above it follows that an 'after' that emerges of strict linearity from a stringent caesura succeeding as oppositional option to a 'before' (as implied by modernist interpretation) cannot unfold its full meaning. Only by acknowledging the encompassing multimodal inheritance from which 'after' arose can multiple alternatives and temporalities be considered. 'After's' delinking thus includes that of the linear trait of universalism towards a *multidirectional memory* (Rothberg, 2009). This reading re-conceptualises agency as a multidimensional doing-being that exceeds modernist universalist traits of one-sidedness and linear progression and allows for their emergence from non-unitary events. Such multidimensional unfolding must necessarily be conceived in a contextual synchronicity of loss and gain on multiple levels (Torchia, 2020). Unlearning, then, as becoming towards the non-oneness, which Braidotti addresses as "humbling experience", is marked by volatile in-/exclusions that are "constitutive of the non-unitary subject" (2012: 174). Considered through Barad's notion of intra-activity, affects do effect via complex routes, which not account from and through the molecular level, up to the planetary. As Teresa Brennan stated - for (and in) the *transmission of affect* - no secure distinction can be established between the "individual" and the "environment" (2004: 6).

The harm done by nonreflective categorisation (exclusion) is exemplified in 1st and 2nd wave feminist studies by the critique received for their universalising approach. Lanser's points at the exclusionary favouritism of "white, Western literatures and perspectives" that enforced a repression of difference within the field, mainly concerning the Americas and its academia, but are not limited to it (1989: 434, 435). Strict classifications, constituting the normative in "Western scientific reason" often flattened and distorted the complex otherness of any other cultures (Alaimo, 2016: 58, 59). This includes a disregard for the nonhuman world, which Monica Gagliano, supported by her research in plant studies, specifies as an attitude in western modernist thinking towards the natural environment (2017: 85) that perpetuates plants to "the margin of the margin" (Marder, 2013: 2). Convolutional categories that idealise

and at the same time marginalise provide a systemic appliance of partial anthropomorphising for all that which would be 'natural' – e.g. heteronormative sexuality in animals -, while simultaneously diminishing the belonging to 'nature' as subaltern. Yet, as the categories establishing the concept of "nature" are fraught with connotations used "to support racism, sexism, colonialism, homophobia, and essentialisms" Stacy Alaimo cautions an improvident collapsing (2016: 11).⁶ Possible subtextual co-readings along "traditional axes of difference: sexualization/ racialization/ naturalization" make the term (and others) ambiguous in its interpretation and a challenge for Critical Theory by demanding a careful attention regarding the shift of "dialectical relationships" (Braidotti, 2012: 171). These inherent traits act in a deprecated manner as applying exterior parameters conceived to distinguish themselves by collapsing the difference on the biggest possible parameter. As such, inheriting Universalism's method of defining the not-one as whole. This establishes nature as a paradoxical scene that "captures a mode of existing in exteriority/spatiality" entirely determined by universal reason, which "mediates that which is accessible to representation – but, nevertheless, exterior" (da Silva, 2017: 287).

In this respect, when looking for ways to exit these modes of western Modernity, 'after' cannot be considered as an erasure of the former (past). To undo Modernity's straight linear time-based mode, 'after' has to pass as something being iteratively inherited by current and future traits. "The mess we find ourselves in" (Alaimo, 2016: 11) expresses itself in ruptures, as critical events (climate crisis, covid-19), indicating obvious symptoms of ongoing ignorance of being with. Pushed into undeniable emergence, these rupture points, however, constitute iterative engenderings of forms of earlier *spacetime matters* (Barad, 2007). As resonances of interferences they mark not-so-surprising accumulations influenced by certain (often western modernist) human routines. The researchers Grove and Barnett thus argue that the notion of the Anthropocene cannot only be accessed as a geological term but also provides an impulse to rethink human-environment relations. In their assumption the notion's inherent prediction of an uninhabitable earth made by realising that geological forces express indifference to human life and "the existence of thought itself", brings an "apparent deathblow against the Cartesian distinctions between body/mind, world/consciousness and

⁶ A recent example that activated the objectification of the Black Lives Matter movement was an opinion piece in a US newspaper with the headline "Buildings matter, too". (The Guardian, 06.06.2020 <https://www.theguardian.com/media/2020/jun/06/philadelphia-inquirer-editor-resigns-buildings-matter-too>)

nature/humanity” (2020: 104).⁷ My scepticism, which also concerns my own attempts, is grounded on existing habits provided by the Vitruvian background that assumes its ‘own (white) colour’ as an unquestionable default. Analysis located on the rubbish of Modernity’s universalism, despite entrenched efforts of theorists and activists, is likely influenced by formerly established structures, which by the thorough extent and expansiveness of the modernist way of thinking may only be shifted incrementally by destabilising the underlying structure. There is an instant need for a careful reassessment of the instruments that structure thinking/feeling, as we (this accounts for almost all, who fell under western Modernist education) are still applying methods bearing prevalent traits from this modernist toolbox. How, then, can these tools be modified to effectively unthink the self-assigned role of mastery and foster genuine change? Audre Lorde reminds that “the master’s tools will never dismantle the master’s house” (2007: 123). Thus, before claiming the construct for undoing the tools (i.e. thoughts and applied moves) that were used in the process, they need to be questioned, reassessed, and modified.

By rendering these boundaries between nature and humanity obsolete without analysing the systemically inherited traits the terminologies carry since their universalising deployment throughout Western Renaissance and Enlightenment, the connotational blurring, Alaimo has cautioned against, is espoused. Such flattening manifests as a posthumanist tendency in a practice of decentring of the human which defies its historical involvement. The human’s integration into nature results in a merging with an unaltered background. A backdrop still saturated by an exceptionalism imperceptible to itself, that for Alaimo, is imbued with racist, sexualist, colonial, homophobic and essentialist legacies. Grove’s and Barnett’s view of uninhabitable Anthropocene imaginaries that collapse the Cartesian system of thought are based on the foreclosing of “a privileged, ‘God’s-eye’ position outside and above the world” that (modernist universalist) humanity occupied (2020: 104; Haraway, 1989). While providing an essential insight, this also may be used to replay the problematic methods of decentring through deploying the notion of the *Anthropos*. As a scientific marker, emerging from western universalisms’ thought systems, the term conveys its ongoing historical declassifications and exclusions of sub-categories, as equally the constantly bypassed impact. As Denise Ferreira da Silva argues in *Toward a Global Idea of Race* representational

⁷ See also S. Wynter’s analysis of the theocentric worldview that was shaken by Copernicus’ new astronomy of a moving earth. (McKittrick, 2015: 14-18).

transparency in generalisations as ‘humanity’ are still based on “post-Enlightenment European social configurations”. The continuous internalisation of exterior things installs “the inescapable effect of scientific reason’s version of universality” and postpones rather than institutes that ‘Other’ ontology” (2007: 259). In dissecting the concept of transparency, da Silva touches upon Julietta Singh’s request for a practice of undoing the violent foundations, both structural and ideological, “of colonial and neo-colonial mastery that continue to render some beings more human than others” (2018: 4). Referencing Wynter’s distinction, Singh states that, “the subject/object of posthumanist inquiry” rather than the human, is ‘Man’, as connotational deciphered in the Vitruvian by Braidotti and Mignolo. Singh’s departure from posthumanism towards an engagement with queer inhumanism intends therefore “to query the human from the position of some of its least privileged forms and designations of life (2017: 5).

5.3 Dehumanising⁸

When everything is human, the human becomes a wholly other thing.” (Castro, 2014: 63)

The above paragraph briefly went over the categorical system that installs exceptionalism’s transgressive boundaries. The fields of critical posthumanism and new materialism are on the way to theorising the human and non-human intersectionality, often overlooking the implicating backdrop of the colonial matrix. In this relation, Alaimo’s term of *transcorporeality* is useful, as a definition of the intermingling of embodied beings with the dynamics of matter, while insinuating meddling with the ethical and the political (2016: 10).⁹ Entanglements enforced by the mechanics of neoliberalism effect forms of neo-colonialism towards humans and non-humans that lead to retraction and extinction. As one example, the current COVID-19 crisis, classified as a zoonotic spillover, is the result of destroyed drawback areas. In a geological sense, these are Anthropocene occurrences that, as a result of human activities, are accumulating as future sediments of “unintended results” (Quammen, 2013: 39). In the occurrence and handling of these crises there is “no stable background and nothing can be set straight.” According to Alaimo, the tangible markers of lived experience

⁸ In his seminal *Orientalism* Edward Said methods of a dehumanising ideology as applied through a web of racism, cultural stereotypes and political imperialism that establish ‘the inherent dominative mode’. “[T]he hegemonism of possessing minorities” and anthropocentrism allied with Europocentrism created a definition of others as “not quite as human as “we” are. There is no purer example than this of dehumanized thought.” (Said, 2003: 27-28; 108)

⁹ ,trancorporeality’ suggests that” all creatures, as embodied beings, are intermeshed with the dynamic, material world, which crosses through them, transforms them, and is transformed by them”. Stacy Alaimo developed the concept together with Susan Hekman and described it first in her book *Bodily Natures: Science, Environment, and the Material Self* (2010). (2018: 435–438).

will matter in a scale-shifting way. This predicates that perspectives, practices, and “modes of being fabricated by those who have not been deemed as properly human” have been othered and must be responded to, in order to de-structure current thought (Alaimo, 2016: 11-12). As made apparent by the handling of the current corona pandemic and vaccination programs, inclusion, as enforced by precarious living conditions, becomes exclusion, because of higher exposure. These reoccurring lines of injustice obstruct the “systemic transformation of our conception of humanness” demanded by Wynter (Kaiser and Thiele, 2017: 404). The central point of Wynter’s research regarding the declassifications of humans into in- or dehuman, is taken up by Singh to assign the least privileged, the absolute minor in regards of the definitions of being human grounded on ‘Man’. Wynter’s demarcation line for the “refiguration of humanness” constitutes 1492 (Silva, 2015: 93), a date that Barad defines as “living inside 1945” (2017: 57) due to the previously noted time encapsulation. This layering of dates is not only defined by different perspectives, but it also connects the massive exploitation of natures and cultures as entailed in contemporary science and the humanities through Barad’s diffracted method. There is no presumed void, only the avoidance of confronting colonialism’s ‘marks on bodies’ (Barad, 2007; 2019). However, as antiblackness’ white backgrounding denies the ontological possibility of “black(ened) people” this renders a problem (Jackson, 2020: 35, 184-186).

Frank Wilderson III, focuses on the notion of capacity to exemplify how western Modernity’s construct of whiteness builds on the necessity of the (African) slave as excluded and denied existence. Pertaining to the monumentalising of (white) “subjective capacity [...] in direct proportion to the wasteland of Black incapacity”, the othering of indigenous people still entails an ontological possibility (Wilderson, 2010: 45).¹⁰ Forced work on plantations “kick-starts and sustains the production of the Western Hemisphere” (Wilderson, 2010: 45; Wynter) demarcating the moment of Europe’s expansion. Addressing dehumanising strategies through Wilderson’s notion of capacity might also be helpful in undoing exceptionalist interpretation of agency. Definitions of capacity and othering offer insight into the construction of a white invisibility matrix against which everything that differs drifts out of this accepted system of capability, becomes hyper-visible but unacknowledgeable. The deconstruction of the universalising category of ‘Man’ into a hybrid praxis (Wynter) implies

¹⁰ Wilderson differentiates the ‘savage’ vs. the ‘slave’ in relation to the ‘settler/master’ setting, which allows the savage to remain ‘ontologically possible’, while the slave becomes ‘modernity’s necessity’: “.. the “Savage,” unlike the Slave, is half-alive.” (2010: 48).

therefore a mutation beyond the subject 'Man'. The recognition of the distinction between the category (Vitruvian) 'Man' and becoming human enables the introduction of systemic transformation. It could undo the dichotomous structure installed in '1492' and take account of the systemic omission to move towards a praxis of becoming human (Kaiser and Thiele, 2017: 409, 410, 412; Wynter in McKittrick, 2015: 23).

The Anthropocene's notorious naming not only already generalises the "anthropos" but by way of both, realism, and "fantasies about post-apocalyptic futures", obscures a deeply ingrained universalist impetus coined by a "Western metaphysical matrix" (Jackson, 2015) and its fragmented ethos (Karera, 2019: 39). As reminder of capitalist humanism, the naming provokes a species identity that re-entangles the era as a whole to the actions that led to the catastrophic situation caused by a Eurocentric exceptionalism and its adoptions. This rightfully pushes the conception of the term into contested terrain coinciding with specific cultural identities and politics (Alaimo, 2016: 152), and thus contributing further to the ongoing manifestation of a geopolitical division "through the grammar of the inhuman" (Yusoff, 2018: 107). Becoming informed of how to face the Anthropocene thus means to open the space for "the afterlives of slavery and colonialism" by providing the allowance for the emergence of the seemingly unimaginable, as what has been excluded or deemed inappropriate juxtapositions (Karera, 2019: 52). A thinking along negative entanglements through these marginalised, tagged as non-relational spaces, establishes for Singh the fault line of unlearning and acknowledging of those excluded, othered and missing humans and non-humans. That is to interconnect dehumanising strategies with those of queer inhumanisms, for disclosing global imperial mappings and marking strategies of (capital M) "Man and its proliferating remnants" (Singh, 2018: 5). The above attempted to address what Jared Sexton refers to as thinking through a material-discursive approach in order to address the "'ethico-onto-epistemological" totality of anti-blackness" (2016; Moten, 2013: 749). It demands to negotiate the negative spaces still active in western metaphysics elicited by entanglements but have been epistemological and also ontological been a-void-ed, in- and hypervisibilised. Alaimo's warning of excluded and avoided meanings in the collapsing of categories do not just appear as negative relation but "as everything and nothing at the register of ontology [...] that stabilises and gives form to human and animal as categories" (Jackson, 2020: 48). This entrapment is neither addressed in the symptomatic of the

Anthropos, nor when talking about 'Man' as 'geological force', thus must be dissected in hindsight of the historical and cultural context of dominant interpretation.

Going through interpretations of the human and recent applications of the Anthropos may appear as a detour, yet, the notion of agency addressed in this chapter, is thoroughly enmeshed in these definitions. Tackling my own Eurocentric education must move through this crucial systemic problem to distinguish the application of 'capacity' as veiled in the current understanding of agency. Reading the socio-ecological fault as "deep and pervasive chasms" intertwined with ongoing processes of geological trauma discloses "the great rift gouged by Euro-modern colonialism in the physical and experiential worlds of others" (Clark, 2020: 159). Only this acknowledgement results in human and nature in *response/i/ability*, which includes the neglected manifold forms of inhuman others and realising their contributions. An ethics of listening and response, which Modernity's universalism up to now denies, denote these actions as care.

5.4 Unlearning agency's 'after'

Humans are integrated colonies of ameboid beings, just as ameboid beings—protocists—are integrated colonies of bacteria. Like it or not, we come from slime. (Margulis and Sagan, 2000: 141)

The attitude of moving onwards in continuous progression, without regard for eradicating particular worlds, marks the centrist worldview or liberalism's one-world perspective (Law, 2015; Wakefield, 2020, 174). Therefore, the tracing of entanglements thoroughly is a rather uncomfortable task, which takes work and risks questioning the self (Barad, 2017: 71, 85). Traces are always intra-active and thus "*sedimented into the world in its iterative becoming and must be taken into account in an objective (that is, responsible and accountable) analysis.*" (Barad, 2017: 73; italics in original). To counter practices of "historical erasure and political a-void-ance" Barad's recent attempts of material-discursive thinking through "time-being" (taken from Quantum Field Theory) can alleviate tracing "to hear the silent cries, the murmuring silence of the void in its materiality and potentiality" (Barad, 2017: 64). Time-being is undetermined, but can be inscribed into human, non-human and inhuman bodies. Barad's acceptance of the beginning of the Anthropocene by evaporation through the atomic bombs in 1945, while realising 1492 as active inside, discerns a waning of the unilinearity of time and allocates an invertible relationality and responsibility "to the ghosts of the past and the future" (2017: 57, 86).

Technoscientific projects, like atomic research, are quite often “entangled with the military-industrial complex and other forms of colonial conquest” (Barad, 2017: 64). This field still considers agency as a one-sided *carte blanche* for assumed steady advance. Affected actants, no matter human or non-human, are deprived of the ability of expressing meaningful (re)actions. In this context, responsibility refers to the moral issue of hubris-guided agential activities in charge of educational or repair tasks.¹¹ The application of the constructed divide in the nature-culture (body-mind, etc) continuum of western modernist approaches, assigns ability unevenly or refusing it, thereby fabricating creativity and change as sole results of huMan agency (Chandler, Grove and Wakefield, 2020: 7). This installs an ambiguous rift where being demarcated as inhuman or only partly human decreases or effaces *capacity* levels (Wilderson, 2010). Wilderson’s notion of capacity, most obviously shows how other cultures are assigned certain specificities to be then demarcated as cultures of de-, in- or non-human realms. These definitions are informed by a double-bind definition of nature as both subaltern and exalted, resulting in a deafness to the entangled responses of others, human or non-human. This then justifies the ambition to control and direct nature through applications of techno-science, rather than attempting to enact a specific response to the systems/beings based on inter-relational needs. This factual undermining of actual processes of natural regulation creates seemingly ‘empty’ spaces (voids), contributing to the erasures of bodies, cultures and ecologies. Relationality, increasingly addressed as assemblages, is often only recognised in its positively embossed patterns, neglecting the inversed structure of gaps (*a-voided* background patterns). Discerning that the reliance on certain structures co-creates negativity means realising these unthinkable passages, the neglected and unwanted sides of acknowledged entanglements. The acknowledgement of systemic *a-void-ances* and violence is essential in questioning the rigid and segregating frame of western Modernity’s universalisms. To return to the ambiguous term of adaption, marginalised communities within one-world interpretations are often demanded “adaptive responsibility” (Chandler et al. 2020: 14) in order to veil the presumptuous understanding of agency. Deliberate denial of affectivity in the part-taking of material-discursive phenomena (intra-action) concerning the planetary¹² is staged as a control strategy that, as self-claimed ‘capacity’, is not recognised as

¹¹ Repair fantasies are addressed for the era of the Anthropocene, in terms of Colonialism such action was veiled as educational enterprises.

¹² That is not the planet understood as earth only but considered with and in all its matter/ing.

complementarily¹³ contributing to the system's depletion. The notional control of affectivity implies denying that critical events (as migration, extinction, or the climate crisis) are relationally dependent on previous and current action. A fantasy of one-sided agency, mirroring the one-dimensional "modernist myth of the human–nature split" (Ernstson and Swyngedouw, 2019: 40).

The assignment of 'after' thus defines a continuing neglect of this wilful assignment through the flattening of capacities. The problem of the symmetrical flattening of agency's distributed capacities conceals the before mentioned levelling in the "asymmetries of power, such as obtain – routinely, structurally, and institutionally, in contemporary Western society" (Vetlesen, 2019: 148). Such obfuscation, not just between humans and non-humans, is also prevalent when blurring differences in capacity through the flattening 'we' or in the thingification of others, as well as matter.¹⁴ However, the performance/film piece accompanying this PhD experiments with the thingification idea for exploring possibilities of interdependence and relationality. The starting point here was not to see everything as human (de Castro), but to find a place "in the family of things" as in the poem by Mary Oliver (1986). Construing that a certain exteriority and separation is required for performative reactions to ruptures of "the supernumerary forms of acting [...] that both sustain and undermine any relational configuration" (Ernstson and Swyngedouw, 2019: 26, 27) we were confronted with the fact that things and diverse human things were enacted on different levels of capacity. Accepting a difference in capacity demands a relationality that allocates possibilities of change and transformation. The above argument may portend to the entangled objectivity that Barad defines as established in exteriority-within as agential separability. The disclosure of the uneven levelling should thus be addressed by an ethics of *response/i/ability*. A point, however, invoking definitions of the *huMan(ities)* background. Agential Realism defines exteriority as non-absolute and only possible in the momentary event of the *agential cut*, therefore possibly providing a step out of the "ethico-onto-epistemological totality of anti-blackness" (Sexton, 2016: [33]) that western Modernity's

¹³ Complementarity importantly understood as ancillary, but also as mutually exclusive. Following this interpretation also the negative 'underside' is complementary by being foundational yet depending on the focus mutual exclusive as in a multistable perception only ever one aspect appears.

¹⁴ This often concerns the dehumanisation of indigenous people, as well as people other than white. And while it is critical to bring that into one line, yet it is a common fact that animals are enlisted as categories that are neglected their rights as beings by just addressing them as assets for the meat production, etc.

Universalisms establish. Barad states explicitly that the specificity of intra-actions in Agential Realism “speaks to the particularities of the power imbalances of the complexity of a field of forces” in a way of accounting for them, therefore producing a “new understanding of causality itself” (Dolphijn and van der Tuin, 2012: 55). Emerging as an entangled form of objectivity based on agential separability, which in “the absence of a classical ontological condition of exteriority between observer and observed” (2007: 140) provides the aspect of relationality. Considered as the momentary and mutual contribution of human and nonhuman mattering in the “dis/continuity in the cutting together/apart” (2010: 247) ‘action’ then unfolds on multiple levels into various sorts of impact. Regarding being entangled into the objective now as responsible and accountable portends the involvement into reconfigurings and also erasures that “are sedimented into the world in its iterative becoming” (Barad, 2017: 73). A perspective that induces an accountability “not because we do the choosing (neither do we escape responsibility because “we” are “chosen” by them), but because we are an agential part of the material becoming of the universe” (Barad, 2007: 178). The issue here, though, is Barad’s drift towards the ‘we’ without qualification. According to Wynter’s (Sexton, a.o.) analysis, the undeclared ‘we’ implies a belonging to the current “Western world system—a system that is now in its postcolonial, postapartheid but still liberal (or now neoliberal) monohumanist symbolically encoded configuration” (Wynter in McKittrick, 2015: 11). It is here that I see a weakness in Barad’s concept, which, it must be stated, could also provide a strength: by leaving one foot on the epistemological terrain of scientific Universalism through the redefinition of objectivity as situated and relational (agential separability), Agential Realism secures its contribution to the field—and by that the option to contribute to change. Importantly, though, this also threatens an incorporation through transhumanist means because ethics and law-induced measures still refer back to western Modernity’s epistemological structures. For the moment, however, Agential Realisms dance at the cusp offers the best option to incite a difference in how ‘things’/matter is connoted. Agential Realism allows to realise the entanglement of ‘self’ as a sediment “dispersed through time and being” (2017: 80) since being threaded through the human and non-human other, and by its relative and situated objectivity discloses the apparatus of this relationality. This establishment fosters an inherent ethical request of “being responsible/response-able” (2014: 184) by being part of, which is incited from this iteration anew and anew.

Therefore, Barad's theory works best when understood as a "trickling through" at the molecular (cell) or particle (atom) level, which constitutes all matter and thus organisms. The work provides insight into the intertwining of complex systems of matter ecology as they emerge within, around and through one other. Agential Realism attempts to understand how selves in the current systemic situation become configured within and through the (triggered responses and neglect of others) systems by pursuing their own specific ways of thinking and doing. While Agential Realism tries for ways beyond the inherent systemic faultlines, that Barad discerns as the deeply settled problematic of universalist Modernity's way of doing (thinking) /being, the uneven levelling of *capacity* (Wilderson, 2010) remains encapsulated, if the 'apparatus' (phenomena) situation is not addressed. Such *a-voided* structural hierarchisation has manifested as fundamentally in "processes of dehumanisation (cf. Aimé Césaire's 'thingification') [...] in a concrete history spanning five centuries of colonialism, chattel slavery and the rise of capitalism" (Rutazibwa. 2020: 223). The apparatus of universalist Modernity has undone the *capacity* of a wide range of human and non-humans through de- and inhumanising, erasing and rendering invisible and mute. The 'we' in Barad's set-up is thus only legitimate when considering the approach to address its own incapability from within a universal-modernist scientific mindset (which however is almost globally expanded) to perceive "the sentience, much less the sapience" (Sexton, 2016: [13]) beyond its structural blindness. An insight that does not argue against science per se, but rather calls attention to the inherent implications of its systemic foundations (Alaimo, 2020: 116). Only by affirming after's baggage, rather than assigning it the modernist progress-oriented notion of 'over' (as inaccessible past), can change be brought about.

As brought up by Joseph Rouse (2016) and Arne Vetlesen (2019) addressing the need for the recognition of more significant differences in entanglements on a 'macro'-level is essential to allocate specificity and proximity (van Dooren, 2016: 60). Access through differences in capacity is indispensable as generalising renders each distinctiveness back into an abstract group of equivalents. In this sense, the notion of Anthropos cannot be used to flatten history, and cultural identities into a universalising 'we'. The crucial aspect for re-assessment rather than exclusivity is that of complementarity where depending on the apparatus (route of thoughts), either more generalising aspects or specifics appear. Considered commonly as mutually exclusive these establish but must be read in an affirmative diffracted mode through that acknowledges its interdependence and thus opens the way for a restructuring.

Concerning the recognition that “conceptual understanding and ethical accountability are always entangled” (Rouse, 2016; Sexton, 2016) Barad’s Agential Realism provides a framework to re-evaluate such current situations. While not directly specifying power relations the attributing apparatus is disclosed. In accounting the in/exclusions through the specific constitutive details of the apparatus, the differences in capacity that contribute to any particular entanglement, are thus essential to be considered.

5.5 Troubling time/s¹⁵

“.. a more humble reception, by listening, by experiencing time. [...] the linear history of modernity, its universal chronology is continually being called into question by a history based on difference, where the present is constantly interspersed by the past.” (Vázquez, 2009: 113)

Barad’s project of thinking through physics is an attempt to reconfigure thought about the universe as a “performative relational ontology [where] it’s differentiating entanglings all the way down.” (Barad, 2017: 66, FT19). Thinking through these trickling through¹⁶ and imbuing effects may lead to becoming attentive to the reverberating interferences, as those neglected responses incited by ‘our’¹⁷ intra-actions. In Barad’s poetic abstractness, though, interferences provoke “tears in the fabric of being” (Barad, 2016: 73) enforcing *reconfigurations* that contribute to sedimentation and thus the becoming of planetary memory. Seemingly disjoint time sequences diffract and in trickling through form “the spacetimemattering of the world in its sedimenting enfoldings of iterative intra-activity” (Barad, 2017: 68; 84).¹⁸ Deep-time sediment, rather than solely providing resources for universalist Modernity’s living standard, is the accumulation of life’s movements. Intra-actions in the present inform the future, while the present is also entangled to the past - in its sediment and memory. Thinking of and through time as encapsulating of a *futurepresent* and a *presentpast* contrasts the chronological narratives of the modern/colonial system that discriminates multi-directional temporalities (Vázquez, 2009: 109). Opening space allowing for the appearance of these multidirectional entangled *presentpasts* is foremost “the

¹⁵ Barad (2017: 70).

¹⁶ Referring to developmental systems theory as defined by Susan Oyama.

¹⁷ Needs to be understood as a multiplicity of different ‘we’s.

¹⁸ “Hauntings are an integral part of existing material conditions. This past – nuclear time, decay time, dead time, atomic clock time, doomsday clock time, a superposition of dispersed times cut together-apart [...]. Time itself is nationalised, racialised, ...” (Barad, 2016: 74).

undoing of time, of universal time, of the notion that moments exist one at a time, everywhere the same, and replace one another in succession” (Barad, 2017: 70).

Disentangling, in decolonialising vocabulary delinking, space from being bound to time-based unilinearity is consequently an unlearning of the practices of the human (Singh, 2018: 148), especially those entailing capital [M] man. Most of the space (including outer space) and bodies, exist within the “colonial matrix of power”, thus for Mignolo there is no escape or “privileged location (ethnic or sexual) from where to confront coloniality” (Mignolo, 2018: 108).¹⁹ Consequently, to foster the “ongoing processes of decolonial shift” has no strict interpretation that praxis always must be preceded by theoretical analysis. Realising both approaches as intertwined in thinking and doing (Mignolo and Walsh, 2018: 7, 50) means to accept indeterminacy and change at the core of response-able unlearning. Actions then matter not because ‘one does’ it, but because of being part of the incited. The ethical demand of *response/i/ability* persists in the face of complexity and indeterminacy induced by our intra-action, which further intra-acts with a pluriverse of happenings along several time sequences of *spacetime mattering*. For Rolando Vásquez, the lingering distress of the past, in becoming acknowledged through a “consciousness of the suffering of the previous generations” (2009: 113) can build strength for the suppressed. In Barad’s understanding of being threaded through the other, also in matter, interlinks the acknowledgment of the suffering (de)human further with that of planetary matter. The apprehension of ‘our’ deeds, the marks left on various bodies from de-human to non-human to the planetary, therefore incites a general demand for change. In times when parts of the ‘we’ became a “geological force”, a foregrounding of this impact may help to finally push the ‘us’ into the background, to allow the emergence of a very different picture.

As the above discussion shows the imbalance of capacity persists in a flat ontology, also when rendered relational, and thus remains problematic. Yet, flattening allows a first step, as in the Amerindian presupposition “where the primordial assumes a human form [...] is radically opposed to the persistent anthropocentric effort in Western philosophies [and] the human becomes a wholly other thing.” As de Castro stresses, this nevertheless renders “the indigenous world neither more familiar nor more comforting” (2014: 63), but offers a route

¹⁹ Though certainly there are different perspectives, different positions, colonizers and colonised, but barely any knowledge that has not been touched or influenced by the CMP (colonial matrix of power).

of thought to access fields outside of the given confines of universal modernity, thus signalling major aspects of the work ahead. Think broadly instead of forward, think in an interconnected manner instead of growth first, think of the other (the threaded through the self) first, is what makes room to be pushed outside of 'your' habitual comfort zone.

Throughout my practice-based PhD project, motion is considered as a concept of knowledge production that brings forward the interdependencies of body and mind, world, and self. Working through movement shifts supposed boundaries by demanding and creating space. Focusing on motion's interference permits to delink and possibly unlearn agency from an understanding as a solitary act. Instead of bifurcation, movement stresses ubiquitous entanglement that cannot be avoided. Interferences, in various degrees, are always emergent providing manifold ways and abilities to respond in different ways. The practical project accompanying this chapter proposes awareness for the reverberating resonances of other matter that co-constitute humans through means of in/non/sub/human matter.²⁰

Alluding to the importance of choices in responding, to delink from habitual dialectical undoings claiming for the only possibly knowable counter-image, I suggest the interpretation of a dissolving 'after-image'. Following the correspondence principle of the dialectical, the afterimage delineates the inverted lingering imprint of embossed information that hints at what was needed to establish the representational/visual in the first place. It depicts the 'after' of western Modernist interpretations of agency lingering as the inversed imprint of non-agency in the limited imaginary of those who defined agency as their given primacy and never thought about entangled response and accountability. The dialectical here constitutes a blindfold by which Adorno defined the horrors of our Euro-modern times, as nothing but "consequences of a dialectic that recognizes complexity, volatility and difference only to the point that they can become subject to techno-managerial expertise" (Colebrook, 2020, p. 184). Given the inability of western Modernity's maxim to imagine anything other than the dichotomous, the metaphorical 'afterimage' complies as the inverted vibrancy of intense triggering. However, its definition as 'afterimages' implies dissolution, the possibility of

²⁰ The threefold in/non/sub-human appeared in the description of the 3rd Biennial PARSE Research Conference at which we presented our last project (chapter 4). The conference aimed for "an interdisciplinary and international debate on [...] the contemporary global condition, [as] it is impossible today to navigate through the dense lattice of emergencies and urgencies without addressing the question of what constitutes the human, inhuman, subhuman and non-human, as well as formulating an adequate response to the anthropocenic threat posed by the human against the planet." <https://parsejournal.com/event/human/> [accessed: 06.07.2020]

delinking, and the creation of space for the yet undefined, usually regarded as interference in the sense of perturbation or noise to appear.

5.6 Noise – reverberating interferences

[A]n ethico-affective approach looks to provide a specific understanding of noise that also embraces noise 's variability and multiplicity. (Thompson, 2017: 179)

Noise relates to movement in that it is always multidirectional and layered. Similar to the void, silence is often assumed to be empty of sound, but as John Cage in his seminal piece 4'33" has shown, it is the listener's freedom and responsibility to decide what to draw from the omnipresent background noise (Cobussen, 2003: 284, 285). Marie Thompson detects in the reverberation of a new sound an interference pattern that "ripples the vibrational reservoir that is background noise, forming a crest" (2017: 76) emerging from "the perpetual sonic flux of the world that is condition of possibility for any audibility" (Cox, 2018: 124). Commonly regarded as non-informative disturbance, noise does not remain unperceived but is conceived as unwanted and neglectable. Regarding noise only in the sense of the missing or the rupture by another mode of organization, misses that noise already in the classical theory of Shannon might be seen as "the Other of information" (Goddard, Halligan and Hegarty, 2012: 3, Thompson, 2017: 42). Noise as the enabler of communication, holds both, a "destructive" and an "autonomy-ambiguity" side. However, as "a constitutive factor of self-organization" in and across systems (Malaspina, 2012: 69, 70) signalling noise can neither be assigned bad or good (Cowell, 2006). Noise provides a shift that "arises as a result of an inversed function of the principle of complexity" (Malaspina, 2012: 70). Its most likely analogy may be "Cowell's notion of the noise as 'disease' and microbe, and Serres' parasite" (Thompson, 2017: 164-65). In this view, noise is the necessary complement that only becomes a nuisance, or signals a warning, when the operability of its habitat system fails. The overload can be both, either too much noise/information, or too less noise. In information theory, noise increases the variability of information. My argument is, therefore, that both extremes of too much information or too less noise create a 'flatness or sameness'. This includes both the predictability of information caused by too little noise and its inverse, illegibility caused by the abundance of noise (Thompson, 2017: 50-52). It is a certain ambiguity that provides the quality of "paradigmatic fluctuation that animates the circulation of concepts among its subsystems" that allows noise to remain decipherable (Malaspina, 2012: 70-71).

Noise, certainly relates to the sonic, but must be understood in a much wider sense by involving “movement, technological processes, mechanisms, objects, frictions, atmospheres, space, knowledge, power relations” (2017: 7). Thompson’s “ethico-affective approach” thus considers both sides, noise as a force of transformation, but also as providing an essential component for mediation (2017a). Noise not only threatens a system but is also an “integral part” (2017: 179), therefore, so it not just causes disturbance, but is also an initiator of transmission (and thus change). In our performance project noise acts as an indicator to



5.01 - Bird's nest and 'cut-back' of a tree near Munich, February, 2021, image: m.jaeckel.

what may be valuable to listen to, the in-between still regarded as marginal. Once accessed as audible, these reverberating interferences are no longer negligible sounds, rather bring through their affective resonance the affordance for *response/i/ability* to the fore. Emerging from and as interference, noise is only meaningless if affectivity and impact are neglected, if no effort is made to ‘read’ it, because its articulations are regarded to be outside the sphere of interest. Noise is usually classified as belonging (human world sounds: machines, ... or ‘natural’ sounds: birds, leaves in the wind, ...) or un-‘readable’. Utterances, which had been absent by suppression, ultimately express themselves, when going extinct. Their absence from the background, shifts the system towards one of its overflow points (of too much/less) of crisis.

Utterances of other species or matter, though, do not always fall within the audible range of the human spectrum. Focusing on plant communication systems, evolutionary researcher Monica Gagliano defines language as a form of expression that emerges as an inevitable consequence of an organism’s engagement with its surroundings (2017: 94). In reference to Walter Benjamin’s portrait of an enchanted world, Patricia Vieira emphasises that it is not spirits of animism which bring the world alive, but its equivalent “unfolding in material inscriptions” (2017: 220). Recent research in plant studies disentangles the notion of language from linguistic phenomena of the voice. The assumption that meaningful utterances are commonly assigned to “the condition that they ventriloquize quasi-, proto-, or posthuman voices” (2013: 113) is thoroughly anthropocentric. For the researchers concerned with the subject of plant languages it exposes an averse, though “deeply ingrained “cultural-philosophical attitude”” (Gagliano et al. 2017: viii) towards the voice of non-human others.

Pointing at research topics such as “plant blindness” (Wandersee and Schussler, 1999)²¹ Gagliano and her colleagues argue that “[t]he history of the relationship between humans and plants [...] goes beyond physiological underpinnings” (2017: viii). To dismiss utterances on the basis of their spectrum and emergence as ‘noise’ (visual, audible), as that which does not fit into the system (i.e. weeds) is as much a blindness, as deafness, for that which establishes information outside the known/perceptible. Reverberating from and by interferences to these voices/noises eventually express the system’s shift towards a crisis as “the consequence of noise on the basis of information” (Malaspina, 2012: 70), indicating a systemic dysfunction rather than a paradigm shift.

One-world world (Law 2015) that assume universal pervasiveness conceal not only the heterogeneity necessary to establish worlds, but also contribute to the inability to discern other systems within, around, and beside themselves. Their understanding is consistent with the definition of agency, which claims all action while at the same time delegates or dismisses response/ibility for co-constitutional processes and their reverberating effects, which are incited and occur in all material-discursive processes. The mess (Alaimo, 2016; Manning, 2016), which is effectively produced as a result of the engagement of western Modernity's metaphysical matrix, unfolds and affects in manifold ways a multiplicity that does not correspond to a one-world ‘we’ interpretation. The process of acknowledging the mess necessitates learning to hear responses and developing abilities to answer. As unfolded above, these responses include voicings as material-discursive engagement, that appear as utterances through movement, decline, excess, etc. The claim of a universalising perspective denies the understanding that each situatedness, each human or non-human world, is affected differently, which does not necessarily connect via a linear relationality or time.



5.02 – Plastic at Kilninian beach, Isle of Mull, June 2017, image: Will Rose, Greenpeace.

To the elemental evolutionary developmental biology (evo-devo) terminology of ontogeny, as the organisation and development of an organism, and phylogeny, describing the

²¹ Plant blindness refers to “the inability to see or notice plants in one’s own environment, leading to the inability to recognize the importance of plants in the biosphere and in human affairs.” (Gagliano, Ryan and Vieira, 2017: viii).

evolutionary development of a species (Gould, 1977), Sylvia Wynter adds sociogeny. Defined as "nature-culture laws", Zakiyyah Jackson discerns its invertible nature, that "culture is not only what humans create but what creates human being" (2020: 161). "[S]ociogenic principles"²² according to Wynter are "symbolically coded and prescribed terms we inscript and thereby experience ourselves as an I and we." The ascertainment of such performativity necessitates the reworking of systemic underpinnings in order to undo declarations that classified as non- or sub-human humans. According to Wynter, a "planetary humanism" (Scott, 2000: 207, italics in original) must consciously attribute to an unlearning of nature/culture categories. Such insight necessitates a substantial change in how we address instances of 'we', and thus the various worlds and the planet by listening to the noise of unknown expressions.

The complex meaning of being entangled in matter(ing) must account for the applied measuring devices and the noise they induced as well as deciphered and transmitted. Apparatus of education and cultural coinage, which we are part of in our narrower entanglement, define how we see our wider entwinements and can only be intercepted and changed piece by piece. For Vetlesen, engagement with physical reality, as pointed out by Barad, is the only way to gain access to life and knowledge about the world. The ongoing worlding of the planetary and its matter, as an iteratively evolving multi-faceted situation/apparatus, necessitates accepting "the impact yielded by factors of 'disturbance.'" This implies "that were it not for those factors, as operative in measurement and in the application of the (meaning any) apparatus" (2019: 126) access to epistemes by onto-epistemic insights would not be possible. Ontological entanglement as being "part of the nature that we seek to understand" thus fractures agency into a Baradian doing-being in which both the noise and the signal are entailed. The means used and gained in observing the environment are never quite separated from that same task as a contextualising "thick" to be in, as well as being threaded through, (Vetlesen, 2019: 126, 127) or in a Baradian sense the emerging matter and meaning. Externalizing this 'thickness' as negligible, the other (non/human or nature), the western Modernist 'we' believed that they could disentangle themselves from the maze of relationality, including that of other human societies and non-

²² Wynter's sogenic principle is influenced by Frantz Fanon's axiom asserting that „beside phylogeny and ontogeny stands sociogeny“. A definition that assigns individual development (ontogeny) as not only influenced by phylogeny (species membership), but into a „dynamic relationship with the sociocultural situation“ (Jackson, 2020: 162).

human cultures. By disregarding the thickness or opacity of differently rhymed parameters, these are regarded as noise and are insignificant for "systems of linear and discriminating monolinguisms" (Diawara, 2017). As da Silva dissects, post-enlightenment's transparency project only suggests representation "when the (juridical and economic) inclusion of the racial others and their voices (historical and cultural representations) finally realizes universality in postmodern social configurations" (2007, xxiv). The problem with such a self-referentially exclusive system, is that it narrows redundant appropriation loops while maintaining a non-existent 'exterior position' that declares expressions of any other ontology as unintelligible. Extinguishing surplus information by dismissing or muting it ignores existing utterances. The zoonotic spill-over, which obviously initiated the current pandemic, may thus be regarded as a noisy detour now affecting human sub-systems. The denial and non-listening of invaluable co-constituting aspects diminished the effects of ambiguity causing a depletion in the 'noise exchange' (Malaspina, 2012: 70) still provided by the dehumanised others, animals, and plants. The overreaction of one system, that of externalised 'nature', to one of its sub-systems of bodies (humans), caused by depletion resulted in a sameness overload in signal structure. The virus jump-over, because of failed communication, as the 'other' (nature) has not been granted signalling features (Rose, Vetlesen).

The detour exploring recent 'after' definitions by Anthropocene theorists earlier this chapter, aside from rejecting a strict linear reading, attempts to further discharge the post-enlightenment temptation to define current crises as a 'revenge'. The perspective taken is that these accruing expressions are 'reasonable', and rather hint at non-rationality or logic in the preferred system of knowledge production. Despite being rendered to the backside of accepted ontologies, these voices now become 'audible' in their own mutated and re-directed ways, casted by exclusion and the neglect of a-void-ed (Barad, 2017: 64) responses. The fact is, declarations of other natures or cultures, thus as not belonging and insignificant, may limit, redirect or incite mutation, but they do not obliterate responses. The problem with noise is that one might get used to it even as crisis indicator. It may not necessarily be a loud sound, but within the wider system structure it might occur as a glitch indicating a currently 'un-decodable' information (see 'code' in Shannon's mathematical theory). For Thompson the glitch emerges due to "damage or imperfections" and potentially unfolds a "transformative force-relation to the relations" it disrupts (2017: 162). The glitch's momentary sliding across its underlining materiality, possibly infers a transformative impact

upon settled rhythms and their cultures (2017: 166). In *Glitch Feminism* Legacy Russell defines the glitch as an encryption “that allows for new modes of signification” (2020: 85). In the stream of sameness of noise/information the glitch becomes an indicator of the hidden, unheard the “encrypted and unreadable” (Russell, 2020:85) that glitches over the impoverished information stream. While certain levels of interference/noise are essential for the concept of information/exchange (Shannon), the glitch acts parasitic within the established relationality, providing a reminder of affective mobilisation or noise-readability beyond that (Thompson, 2017: 166). Affecting relationality by omittance the glitch introduces 'impurity' into the expected that rather than solely hinting at something missing, provides a phasing into a different rhythm or tonality. That means that imbalances in noise/information are expressed in mutually exclusive complementarities. However, these neither render the other version as underside nor declare it as non-existent possibility. As potentially there, but indeterminant, this allows - in difference to dichotomies - the emergence of an otherwise.

This PhD project considers agency's interpretation within the dominant Western thought system as a key notion that most exemplifies European Modernity's misinterpretation as a generally one-sided affected affair. Its understanding as one-sided action, does not elevate any human above response/ibility, nor does the insight of situatedness diminish adequate response-ability. While 'we' may not be able to hear all murmuring, nor understand it adequately, other matterings cannot be declared mute, senseless in their own rights, or as a vacuous Terra Nulla. As provoked by the omnipresence of more or less noise in information theory, also in the world of physics, the void of the vacuum is far from being empty. Rather *“it is filled with all possible indeterminate yearnings of time-being; or in this drum analogy, the vacuum is filled with the indeterminate murmurings of all possible sounds: it is a speaking silence.”* (Barad, 2017: 77, italics in original). The murmuring space of possibilities (variations of decipherable noise) confirms Vetlesen's objection that 'our' knowledge is always gained from within entangled experiences. It also affirms Barad's insight that 'we' are never able to clearly access the matter, workings and meaning of 'our' changing surroundings in all of their possibilities. Through her Agential Realism Bard develops - following Bohr's embodied interpretation - a relational concept of agency as doing-being with and through the apparatus. Her concept of objectivity, while based on insights of the universalist system of science, allows a more expansive view due to its foundational relationality. While the method has no integrative function to undo power inequalities, it generates the opportunity to "be

attendant to the political generated by the entanglement of matter" (Coleman, 2018). A point that portends the ethical impact that each intra-action entails as a result of the underlying sociogenic principle (Wynter).

As participants in and of various systems 'we' cannot refuse procedural adaptation, but must consciously modify the response by realising adaptation's slow change towards transformative adjustment responds to multilateral and iterative interfering. The constant development of complex processes already acknowledges that interferences create resonances expressed in steady incremental change in amount and tone. In thinking through movement, I tried to avoid adapting to claims of fitness, but rather access it as a process of loss and gain (Torchia, 2020). Adaptation then becomes a process of exchange. Western Modernity's continuous progress of self-improvement is achieved on the exclusion, suppression, extinction of humans, of species, of plants, of materials, pollution of air, earth and water. Muted by 'our' adaptation to a decreasing noise/interference level, means less information exchanged, avoiding assessment of how "we transform the world" and creating a *shifting baseline* (Pauly, 1995) of acknowledgement. These syndromes of *generational amnesia* (Kahn, 2011) mark adaptation as not just a positive process of adjustment, but also as subconscious acceptance of loss and mutation. Idealising replacement processes by naturalising a "degraded condition as the nondegraded condition" (Kahn, 2011: 165) is encapsulated by the idea of progress, where experiences are considered 'better' by quantity over quality. The analogy of the noise/information complementarity may serve to remind us that quality emerges from a de-codability, which rather than being found in unison, elicits from diversity. On this extended background, a slightly deviant move does not appear as a 'mistake' but rather as a move towards that which is not immediately understood. That could be a route towards learning after delinking and unlearning.

*“The only way to get outside the dualisms is to be-between, to pass between, the intermezzo
[..] never ceasing to become.” (Deleuze and Guattari, 1987: 277)*

6. Conclusion

6.1 Practicing theory

This practice-based PhD project intends to shift the boundaries of exclusivity pertaining to knowledge production. Working and thinking with and through movement, which is not acknowledged as a relevant contributor to the epistemes of western Modernity, is assumed to abate the influence of a systemic prevalence of the cartesian bifurcation. While referencing embodiment, situatedness and thus a partial view of feminist new materialisms, it is also thought of as an attempt to decolonise one’s own modes of thought without repeating traits of appropriation of other cultures’ knowledges.

The problem of what is perceived when I perceive and how to perceive beyond systemic blindness poses a systems’ theory question. Movement offers a loophole to work with an unacknowledged way of knowledge production within the system, potentially extending or changing it. As embodied praxis, movement provides a pervasive trace throughout the binary system of knowledge by already compromising the body/mind split that expresses itself also in the practice/theory divide of western Modernity’s epistemology. What if I regard body/mind as intertwined and supporting, analogous with the proven connection between walking and thinking? Each part’s contribution may contribute their own specific result, but the particular achievement has only been made possible by a body/mind cooperation, an affectively cooperating practice/theory intertwinement in a mutual exchange.

Barad’s Agential Realism, by affirming a situational, phenomena (apparatus)-based objectivity, obviously provided the appropriate tool for the above specified inside position, where an absolute exteriority cannot be claimed. Movement, classified as a physical access point, is assumed to be of minor relevance in the production of epistemic results. Yet Barad’s framing offers an onto-epistemological impetus, together with insights from developmental systems-based research in psychology and biology, as well as neuro-scientific findings, that allows to recognise motion as fundamental. Motion is of interest not only as an initiating feature for all living forms, but also in Barad’s argument for the mutability of matter, which allows for a changed understanding in physics. As planetary vitality motion gains attention for

geographers of this era, the animated narratives of indigenous worlds are equally resounding. Can 'we' hear that?

My position does not argue for a correlation with, but a tracing and transposition of movement (knowledge) understood as expressing itself as co-constitutional. Always incited by prior movements, motion's iterative momentum sets a departure point for thinking through and with affectivity. This allows to address the core problem Barad's theory centres on, that of agency, which further mirrors crucial systemic structures in western Modernist thinking. Research informed by artistic practice furthermore offers the specific constellation of moving towards 'out of bounds' of traditional field conceptions, which fosters a particular way of mutual incitement. Informed by the notion of literally transposing "[t]hought experiments [as] material matters" (Barad, 2012: 208) as practice, the experience gained in these experiments prompted a traversal of theoretical fields in search of interconnections. The ambivalence that emerged from these not-yet clearly defined spaces or expressions in the interfering and thus intra-active play-out of situations provided a crucial method for the entire PhD project. In reference to Julietta Singh's concept of dehumanism, I see ambivalence as a force that calls into question commonly held notions of "it is like this" claims or mastery (Singh, 2018: 21). As such, the set-ups for try-outs and understandings may irritate an audience or onlooker. However, they are interpreted as a request for exploration to be played out, which may then include insights that were applied back into research.

Confronting the neglect of motion as a knowledge-providing constituent further tackles bifurcation as a core feature, by being considered as a demarcating thread pervading the guiding normativity of my cultural horizon. Regarding tacit knowledge as an essential contribution to epistemic insights furthermore provides impulses that incite processes of unlearning of an overpowering rationale. Even retracting the fingers from an open fire is a learned rationale that involves the senses. The approach through motion, which is essential in all processes, is regarded as minor knowledge and aims to disrupt the continuation of progress by declared rational means as a method of exhaustion of the surrounding. Movements relationality to materiality transports the co-constituting aspects of slipping, sliding, or any other affectivity that converses from and into other matter. These moments also mark tipping points where something else becomes perceptible and possibly irreversible. Translated into the audible realm, this refers to the neglected voice, alarming sounds or

relevant silences. Such crucial expressions of noise entered the project relatively early. But it was only through mutually influencing reworkings in thought and practice that I was able to grasp its full value as an abstract concept. However, despite being illegible noise, as part of any communication, it is also by no means abstract, but provides a hint at the material substance that it emerges from. Noise, therefore, contributes the indeterminate, as the not immediately decipherable. Regarding the thought experiments incited by thinking through the analogy of the afterimage of 'after', it was the visual noise that offered the opening. The experience offered insights towards the imminent flaw of exceptionalism that especially concerns the capacity of thingified or objectified things (Morton, 2021: 14).¹ A problem that lingers over the second performative work.

Being informed by thinkers such as da Silva, Wynters and Wilderson allows to discern post-enlightenment's quest for transparency as in fact a dismissal of opacity. Yet, opacity holds all which cannot be perceived, entails possibilities, ambiguity, and in/determinacy. Still prevalent in western Modernity, however, is the attitude of avoiding the in/determined by categorising as dichotomic, rather than keeping an opening for the emergence of other possibilities as suggested by the metaphor of the 'after' afterimage interpretations. Attempting to dismantle biased key systemic notions that establish the system structure in interconnected connotations reveals the undercurrent system of thought. In terms of research investment, the project attempted to temporarily take hold of an unresolved state in order to consider unresolved points—for example, when is it a learning and when appropriation, and when do I see my flaws reoccurring within my understanding. I certainly did not identify any 'once and for all' (Barad) result, but rather an uneven possible route. In terms of the method of working through movement, this meant that, for example, only contextualised definitions were provided. Movement or assumed stillness takes an abundance of forms, as does the widespread neglect of its impact. Further movement cannot only be attributed to capacity. Amongst humans and declared dehumans, capacity often references aspects of fitting and as such nothing to with ability. It is rather a feature that is assigned in context with conceptualising attitudes that, through categorising, becomes assigned as systemic feature. On a relational level, one is tempted to neglect such ingrained features. Attempts, whether as in our case to declare all a thing, or in de Castro's suggestion that everything as human

¹ „[A]nything at all is called objects in OOO, and these sorts of object are sharply different from objectified things ...“ (Morton, 2021: 14).

problematise the idea of de-centring. Regarding this research's situated case as from a position within western Modernity a huge amount of naturalised, racialised, and sexualised problems (a.o) arise - as warned by Stacy Alaimo and attempted to be addressed by Sylvia Wynter and Zakiyyah Jackson.

Approached through geontological processes like decay and sedimentation are remainders of life "dispersed across many modes of existence" (Povinelli, Coleman and Yusoff, 2017: 178), that again provide possibilities of reproduction. Such different degrees of converted expressions of motion concerns all of the environment and its inhabitants, from stones to birds, as well as the human and its body. Focusing on governing modes through definitions of geontopower (Povinelli) examines recent definitions of the Anthropocene. The human there however, reinstalling Man, is rendered a geological force "as a disembodied potency" (Alaimo, 2016: 149), that is able to alter the climate as well as sediments. Agency from this perspective remains uncontested and responsibility an educational self-purpose (Kirby). While being careless about what is being excavated, accumulated, and moved across distances for imperialist enterprises, these processes, nor their material results, are fully realised because of the entitlement of being 'a force' "humans are rendered strangely immaterial" (Alaimo, 2016: 150, 156). Yet, the repercussions always have been audible on various levels. Their increase might now provoke taking heed of the question to be posed as: how does it feel to *be moved to moving*?

Responding to this, demands acknowledging the general ability for expressing meaningful (re)actions of mutual affectivity, no matter whether human or non-human. The western modernist impetus of inverting agency's mutuality reacts with denial to the reverberating effects in the idea of 'after'. Response-ability, though, is realised in facing the messy centre, rather in "shunting responsibility onto a transcendental truth or regulation or onto a denigrated and demonized other" (Povinelli, 2014). Understanding that 'we' by way of 'our' habits of living and understanding are effectively engaged in this production of mess, demands also to affirm that any human as also the planetary are affectively hit in manifold ways. Perceiving difference affirmatively would allow to unravel connotations that are tethered to western modernist traits of linear progression and claimed by its exceptionalism. One-sided exaltation binds agency to a centrist worldview of steady advance, in which no response/ibility is required. Haraway's suggestion to move the boundaries from within

becomes activated due to my position within this knowledge system whose fringes seem to become more and more endangered borderlands. In accordance with Barad's relative objectivity as *exteriority-within-phenomena* my research works along these pre-given outlines, but hopes for unfolding perspectives that 'show up' (Noë; Sperling) from agential cuts, where doing-being becomes activated to open towards different interpretations of relational affectivity.

6.2 Performances as situational instantiations

In this project, movement, along with its ally performativity as enacted experience, served as the pivot to demonstrate interdependency. Interaction, while obviously easily transferred into physical enactment, revealed its difficulty in weighing contribution (capacity) in agential explorations, as in, when does it truly become intra-action. While the notion of agency seems only to be slightly challenged in human centred dance practices like contact improvisation, it can be more closely examined in the material-discursive enactment of Parkour practitioners. Intra-action addresses capacity on the level of *response/i/ability*, provoking an essential marker of (material-discursive) interdependence - existentially activated in Parkour. The tendency in western metaphysical to distort the ability and necessity to respond into historical 'after' situations without before implications allows to continue the delusion of a sole enacting force, and its inversion for being the overwhelmed. These considerations also informed the context for adjunct interrogations throughout our presentation in the engagement with props, by conceiving materiality as speaking back. This was literally transposed by in the amplified textile pieces or other things including mushrooms, coffee cups and packaging parts. The intention was to summon the key notions that were taken from theory to be considered feeding back into the performance work: *agency (doing-being)*, *intra-action/interference*, and *performativity*.

Approached through a *meshod* of speculation and experimentation, the thinking through and with matter was considered on the scale of a common denominator, which was the molecular level. The intention that 'signalling' is all around, proven scientifically but not recognisable by most of the human species (except possibly some dehumanised indigenous knowledges), was central to the first performance. Working with the e-textile props of the German-Brazilian designer Gabriela Guasti Rocha referenced influences drawn from original weaving patterns of various Amerindian cultures Rocha had researched across her home

continent. Through this connotated relationality the pieces transported a philosophical affectivity for the environment, which at least partially also can be retrieved in Parkour and ADD. Parkour, more likely than classical dance, picks up on the interrelation between interference and response. In the momentary adaption multiple lanes of choices between minimal adjustment, or adaptation as an interfering attitude are considered. Yet, an awareness to other matters, aka noise-audibility/response-ability, is generally not predictable as reciprocally co-directed by situation and context. In Parkour and ADD, movement-based exercises keep alive the understanding of adaptation not just as affirmation of the now (built environment), but also as a form of resistance that counters subdued behaviourism. Adaptation's subconscious affirmation, while seemingly enhancing the exceptionalist understanding of agency as one-sided dictum (I can do that jump), also enables to traverse pathways differently. Its material-discursive interdependency for allowing a safe jump teaches lessons in embeddedness. Jumping-being here is never out of context, but rather influenced by an infinite amount of factors/noise/voices.

The elements and defining notions - *movement/performativity/interference* - react interconnected, thus escaping strict normativity or too habitual routes. Their iterative intra-activity (Barad), considered a meshing within our project, is often not easily perceptible, but instead becomes noticeable by effect (as in the molecular foldings of virus mutations (Bamford, 2020), following the defining principle in the ongoing performativity of the world. Barad's notion of intra-action condenses agency as doing-being, which in our performative experiments was considered to regenerate in interferences. These are inherent in the transmission of electromagnetic waves, but they are amplified by disturbances (such as mobile phones), as well as their reverberations. In our performative interventions these interferences became audible experiences of physical intra-action on which the dancers again reacted – as an attempt to mediate agency's powers of multilateral affect (Slaby, 2020: 4). Sensed experience was considered essential for orienting in all practical activities within the PhD project. Interference, therefore, provided the adequate expression of others for and by the affective impact on them, rather than signalling disturbance for the existing (self/world). In this regard, the first performance, in particular, explored the given and not did invest so much in speculating about a possible otherwise as the second one. Essential for this orientation towards affectivity were also insights gained in cognitive sciences (Slaby, 2020: 3) whereby embodied sensitivities establish the intensely intertwined body-mind backdrop from

which the unique situated perspective of involved participants is processed. The discourse which contextualises cognitive processings in terms of embedment, embodiment, extended, and enacted consciousness permeates the exclusionary demarcation settings set for the self. Being extended, embedded or even enacted by the environment brings into question nature versus culture dichotomies as border-drawing distinctions providing a shift towards material-discursivity.

These insights thus provide another push from within to dismantle the sole action of “enlightened responsibility” (Kirby, 2014: 62) that would justify an exceptionalist definition of agency towards a contextualising setting. Yet, this means to stay with troubled responses adjusting 'ourselves' as interfering and being interfered by learning to listen to what has been dismissed as noisy, mixed or messy, and disturbing, and thus regarded as non-intelligible. Such acknowledgment questions the subject definition of western Modernity's self. It has to work against the tendency to throw a unison 'we' onto humans and dehumanised beings across the planetary despite the vastly differing impact levels of devastation and extinction. Western Modernity's exceptionalist perspective must be undone by the acknowledgement of what appears as disturbing and limiting interferences and resonances of others – whether human or non-human matter. Considering oneself becoming a noise among others induces listening and responding on the level of mutual exchange, accumulation and possibly as interdependent interference. Such pluriverse and multi-levelled entanglement breaks "the delusion of stability, the phantasy of omnipotence". Braidotti thus defines entangled difference as “constitutive of the non-unitary subject” entailing "the recognition of a prediscursive structure of the “self,” of a necessary loss of that which is always already there – an affective, interactive entity endowed with intelligent flesh and an embodied mind". Despite differing backgrounds and fields Braidotti joins Barad's conclusion that what comes to matter, including the entity, which out of lazy habit is called 'self' (Braidotti, 2012: 174), is ethically bound to co-constitutive multiple alterities.

While having started with a vague image of interference in the earlier performance project *signalling - at a molecular level*, noise/sound became a major element and metaphorical instance in the later (film)work *reverberating interferences - explorations into thingness*. Actively tied to the problem surrounding the notion of agency, the experimental settings operated intertwining thought and practice, not only in relation to the modified everyday

things, but also in regards of how the participants dealt with each other. In the set-up of the second performance piece, 'things' as the props, but also some of the performers, had been amplified through devices to have the utterance of their movement be audible and thus interference into the human spectrum. The final film documentation, with the exception of the voice-over, focuses on recordings from these amplified interference patterns, which were considered ways of communication that emerge from intra-action. Most of the sound exchange between things and the bodies of some dancers was enacted by light sensors (Martin Hug) upon approach, with only a few attached to plinths that were touch-sensitive, and so closer to our pre-pandemic sensibility. Most of the touch approach as well as audience interaction had been eliminated due to the pandemic restrictions. This included the decision to narrow the set-up into a lab-like situation through the enclosed experience of an 'septic' studio space. That effectively imposed an enclosed interior-setting in which we performers were confronted with some objects/things and the electronic enhancement of noise caused by the interference of all 'things' in a white cube room. Rather than an intra-active setting that integrated the larger space of Ambika P3, an audience and movement-activated devices throughout the space, the performance piece was reduced to this 'clinical' setting that included performers, camera crew, mushrooms and things in the architectural space of Studio 2 at Wayne McGregor Studios. The pandemic outbreak intensified the situation by literally removing a reachable outside for this experimental film set, it rendered implicated constraints tangible. It necessitated improvising with the inherent movement and noise possibilities provided by this enclosed situation.

Aside of their communication through the signalling of molecules (Simard) with other plants we do not know if and how mushrooms sound. What utterances are made, in which way, by what means, as to be declared a thing? Is the accumulation of plastic at sea comparable to a ringing tone, because 'we' did not listen before? The failure to listen to other humans, and non-humans, in order to avoid perceiving their gestures and moves evoked by gruesome violence is ubiquitous. It is the result of a distorted understanding of agency as one-sided, enacted and thus imposed by attempting to exert control. An attitude affects from the molecular up to the macro along interconnected routes in each entangled thing, and thus has left and continues to leave obvious marks on human and non-human bodies. *reverberating interferences - explorations into thingness* tried to listen to the non-decipherable and to

understand how to be a thing. In naively² attempting to follow Mary Oliver's poem line "to find a place in the family of things" (1986) we attained gaining awareness for even being overwhelmingly entangled with what is regarded as the most humble or useless thing. However, such, simplified affirmation of things not only reveals in- and exclusions, but also points to the systemic abject induced by 'thingification', especially when used to dehumanise. While we moved towards an unlearning by shifting the borders from within, we thus realised that acknowledging the other must be unravelled in the self. The performative method enhanced by the constrained 'clinical' setting, exposed the systemic flaw of the 'we', or more specifically, the universalising attitude that is constantly active in a knowledge production influenced by parameters uncritically inflected by western Modernity. Listening as a means of gaining the ability to respond differently also highlights the western understanding of an individualised self's narrow span of answerability. The plurivocal experience of the performance experiment contributed importantly to this insight. Its realisation as a film attempts to thus depict a layered multiplicity of activities as well as ways of perceiving, where things and events are not laid out along a strictly linear timeline. As part of the resonance of matter, we ought to be open for the other ways in which the ever-changing pasts/presences mixes. The performance as situation and apparatus aimed to enact matter(ing) differently, as each voice contributes to the emergence of the becoming.

Regarding the current situation of the pandemic and the climate crisis, even a unison resonance can be traced to the presence of a co-existing parasitic virus trespassing from a parallel world (Quammen, 2013). Clearly, its world has been narrowed down, abstractly this may be considered noise that spilled from the adjunct system, which had removed the rules of its own right of being. Now it appears as surplus information, an alarming signal, hinting at an immanent crisis of the system it has been 'hijacked' into. A noise that could take over by the reduction (extinction, retraction) of the pre-existing utterances/ noise (of plants, territory). In eliminating the buffer of diversity, it can now become a viral unison. To paraphrase Serres, what or who is the parasite here? Is it this that causes a likely defensive overreaction of (immune) systems, or is it the one who initiated a collapse in the over-all climate of animal/plant/earth? Is COVID_19 then a metaphor for the strident sound of a

² Depending on different online dictionaries a search relative to *naively* brings up a.o. some synonyms, which appear quite telling in context of this research: naturally, unaffectedly, artlessly (all Meriam-Webster) and unenlightened (dict.cc).

signal that was previously ignored because signals from the eradication of animal terrain were regarded as non-readable noise?

6.3 *unlearning (in) the Anthropocene*

As attempted to be shown throughout this thesis, the one-sided concept of acting that western Modernity promotes provides distorted criteria, as in agency there is no such thing as solitary enactment. Interferences, and their reverberations, each indicate, constitute, and embody situational perspectives that are important. Stirred up by any motion, interference is necessary, unavoidable, and most noticeable in the emergence of something unknown. Movement transports the indeterminate eventually transposing it into a differing moment or experience. Thus demarcations that attribute value judgements, such as 'noise' (whether audible, visual or otherwise) to interference ignore noise as the indicating marker for "a perturbing force-relation that, for better or for worse, induces a change." (Thompson, 2017: 42).

Trying to work through the notion of agency in 'taking thought experiments' that emerged from texts, in writing, and throughout performing exposed integral problems in addressing it. A relational approach, such as that elicited by Barad's Agential Realism, tempts to introduce a flattening attitude on an ontological basis. This, however, veils the various levels of capacity adjunct with the different voices involved in doing-being (agency). Generally, this ought to be addressed by a system-immanent ethic-onto-epistemological approach. Realism thus provides an opportunity to undo/shift parts of the given knowledge foundation, by iteratively reinventing a different attitude step by step. However, as its ethico-epistemological foundation is frequently still rooted in the systemic of western Modernity, caution needs to be taken in determining by which means notions like 'we' portends as defining guidelines. Expressions like human/ity cannot be saved as generalising terms, as long as they are deeply ingrained with the Western Enlightenment project as Mbembe, Jackson a.o. remark. A flattening approach through the collapsing of categories residing in western Modernity thus carries on its abject 'underside' baggage.

This project thus asks, how to create the awareness that is in demand for *response/i/ability* beyond the learned range of answering? The task of unlearning entails the learning of listening to different sounds, to what is frequently dismissed as noise or minor in the surrounding soundscape. What we (in performances and in writing) attempted to realise

were the exclusions and exhaustion of the non-fitting that always reverberate from all 'our' actions. If any movement causes, and in some ways also responds to, an interference, the aim is not to avoid any movement, but to address and incite change by listening and responding differently. It led to the realisation that affirming intertwinement by acknowledging one's own and other forms of interference, allows one to realise that they do not exist solely for 'us', but that 'we' became through and with 'them'. The prevalent system of thought is constantly re-installed through the way 'interferences' are enacted and responded to. Thus, the undoing towards a different way of thinking is incited by a different way of moving, an attitude towards breaking habits and becoming attentive to the signalling of interferences. Our exploration into thingness, further provided the physical experience that de-centring cannot be done at the expense of the flattening of capacity.

The questions, though, raised by a space of the afterimage's dissolution may need to be addressed, such as how can an ethics really be relational? Zylinska's cognitive-affective suggestion for a geo-moral approach bears the problem that it may be defined by the loudest speaker - that is, incorporate traits of the overpowering system. My question then is how to find a space where the less powerful can be heard, and where things can emerge otherwise. Agential Realism offers an entrance, yet if 'we' humans (sub-, de-, in- and non-humans) are a many worlds world the 'we' which addresses as general term cannot be applied to attain to a 'planetary habitability' (Mbembe, 2021; Chakrabarty, 2021). Not only does it reinvigorates anthropocentrism, but also flatten the capacities of humans and non-humans by the "erasure of dehumanisation" (Pasha, 2020: 361) - and in terms of the Anthropocene - the various levels of impact/extinction. Thinking formerly-called-agency through the non-human and the environment as witnesses of colonial and imperialist violence from non-essential specific situations that crisscross or diffract diverse relationality offers an option.

Actual methods for knowledge production are ingrained in our minds, thoughts, and thus our moves. Thinking through and with movement is an embodied (embedded, extended, enacted) mind approach that, also includes lived experiences as contribution in knowledge production. Barad's onto-epistemical approach, which in staying with the epistemic demand of objectivity while diffracting it with the situated experience (phenomena), offers an interesting option to tackle the existing modalities. The crossing between the established fields may need to be extended by Mignolo and Walsh's insight that leaving the matrix of

colonial power demands an unorthodox interweaving of theory and praxis. There is an immense need to listen to the indecipherable and allow time for its in/determinacy as possibilities of becoming. Things are intertwined on multiple levels (micro and macro), more than imaginable once 'we' start to challenge the prevailing system of thought from being in the midst. At the core of this entanglement are the most pressing issues of addressing racism, environmental injustice and multispecies being-with. The Anthropocene and climate injustice are rendered visible not through the 'we', but through the indifference to listening to forms of expressions of slow violence (Nixon, 2011) that relates back to 'our' way of thinking and moving. Therefore, the demand is to unlearn by acknowledging paths for the yet in/determined. We have only just started to become aware of the noises caused by interferences that reverberate back on all of us - in very different ways. Unlearning accepts that not understanding does not necessarily reduce the relevance of the heard, nor does it diminish the *response/i/ability* towards it. Accepting to be moved fosters a learning from and with it - to move differently.



6.02 - *reverberating interferences – explorations into thingness*
movement practitioners: Giulia Iurza, Paolo Pisarra, Louiseanne Wong, Selene Travaglia and Oyster mushroom at Wayne Mc Gregor Studios, October 2020, image: Lene Vollhardt.

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