Experimental Polyphony: On the Media Ecological Research of Intermediate Bodies

Daniel Fetzner and Martin Dornberg

Abstract: Our media-artistic performances and installations, INTERCORPOREAL SPLITS *(2010–2013),* BUZZ *(2014–2015),* WASTELAND *(2015–2016), as well as our new collaboration with Bruno Latour,* DE\GLOBALIZE *(2018–2020), are not just about polyphony. Here, however, we rediscover them under this heading, thus giving them a new twist, while mapping out issues, mechanisms and functional modes of the polyphonic.*

> At the gap at which something appears as something [...] and it separates what is from itself, the representation by the medial is located. (Waldenfels 35; our translation)

Since 2010, we have carried out five media-artistic performances and installations on themes and questions that are to be examined here from a polyphonic perspective: the project cycle *INTERCORPOREAL SPLITS* (2010–2013), comprising three Skype performances, the artistic intervention *BUZZ* (2014–2015), in an Indian insect laboratory and a Freiburg gallery, and *WASTELAND* (2015–2016), a project combining two different waste recycling systems in Cairo, Egypt and Eschbach, Germany. A new project cycle has just begun at the time of writing; in cooperation with anthropologist Bruno Latour we at *DE\GLOBALIZE* (2018–2020) are working across three different "Critical Zones" of the earth, in India, Egypt and Germany. Our projects, of course, are not just about polyphony.[1] Perhaps not even mainly about it. And yet, it makes sense to rediscover them under the aspect of polyphony, and in that way to give them a new twist. The goal of our discussion is to map out issues, mechanisms and functional modes of the polyphonic and so to open up new dimensions not only of these projects, but also a haptic-sensual polyphony and related intermediality and transmediality—not least in their interactive documentation forms.

The Intercorporeal Splits Research Cycle

> Close to noise, chaos and deadly disorder new things arise. (Serres 7; our translation)

Letters, telephone and other channels: there are many ways to communicate with other people at a distance. For a decade now, we have been making increasing use of digital live channels such as Skype, which do not simply bridge distances, but create a new type of intertwining. As with telephoning, in this topology there no longer is a clear physical connection between the here and the there, no defined in-between and certainly no measurable distance for an "in-between" in mediatised space. At the same time, the conceptual promises of a new immediacy of ubiquitous media or intelligent environments are insufficient—rather, we are currently dealing with a prioritisation of mediation. New rhythmicities, zones of interaction, improvisation and overlap are created, as well as complex polyphonic

arrangements of sensual/experiential elements, material actants and connecting structures, which create polyphonic and haptic medialities that can be experienced and picked out here as central themes. The core question is how the relationships between the individual and the milieu relate in a new way in the form of media and technical structures (Hörl). These microstructures can be investigated with regard to their sensory, haptic and rhythmic multi-voiced qualities—how they each unfold their own (trans)medialities and how touch/proximity, non-touch/distance and their rhythms and references become remixed, unfolded and conceptually comprehensible in them.

The three Skype performances of *INTERCORPOREAL SPLITS* do not focus on the separating impulses of the active subjects and their media, but pursue a radically embodied, techno-ecological perspective. We are essentially investigating "extended phenotypes" (Dawkins), which are created through the continuous process of our organisms being parasited on through the electronic channels. Seen in this way, Skype does not connect separate people and places, but rather creates a common environment through the experience of the presence of voice, skin and rhythm, and temporarily opens up a "third space" or a "third body". Through medialisation, man, machine and environment develop an emergent relationship between organic and inorganic environments, a tactile/haptic-medial, embodied ecology determined by complex polyphonies. This is a central assumption of our test series.

Figure 1: The dancer Graham Smith and the actor Georg Hobmeier begin their stroll. *PEAU/PLI*, 2012.

More in detail, *INTERCORPOREAL SPLITS* is subdivided into a cycle consisting of three Skype performances with accompanying exhibitions. With two musicians, the translocal improvisation *VOICE VIA VIOLIN* (2010–2011) generates third-body experiences of digital intercorporeality. Using dance and signal-reinforcing electrodes, *PEAU/PLI* (2012) unfolds

reality shifts, transitions and fluctuations between different urban space situations. Finally, *EMBEDDED PHASE DELAY* (2012–2013) is a performance on the Helmholtz phenomenon of the "missing half-second" (Schmidgen) involving a dancer, a tabla player and a musician, who, with the help of his electronic equipment, revises the sounds coming from the other stages and plays them back in a new form. Here, various levels of the polyphonic play a particularly prominent role.

On the theoretical level *INTERCORPOREAL SPLITS* uses the environmental model of the biologist Jakob von Uexküll (*Theretical*; *Kompositionslehre*), the plateau and rhythm analyses of Gilles Deleuze and Félix Guattari and of Henri Lefebvre, and the concept of "intercorporeality" of the phenomenologist Maurice Merleau-Ponty (*Visible*; *Phenomenology*). In order to create a polyphonic-spatial multilayered nature for the performances, the actors were embedded in an Indian insect laboratory, in a huge electronics retailer during the Christmas sales in Southern Germany, in the rhizomatic network of the megacity of Cairo, as well as in a former workers' pub in Freiburg, Germany. According to Deleuze and Guattari, rhythms are born of constant transcodings out of chaos and only become effective through links established from one milieu to another. Through the medial interplay of improvisation artists via voice, skin and rhythm, in these environments local "functional circles" (Uexküll 127) are set up with specific temporal structures, which have an impact on the event as an induction of trance. This works precisely because Cairo has a completely different rhythm from Bangalore, the data connections oscillate differently from the microrhythms of the body, and vocal cords oscillate differently from loudspeaker membranes. The individual embeddings' experience of a polyphonic asynchronicity via the electronic connection, while the artists' bodies expand kinaesthetically via improvisation into their field of media-ecological action. In this hyperlocal but goal-oriented mediation (Dornberg, "Die zweigriffige"; "Dritte Körper") through contexts of action a "current without beginning and end" (Deleuze, "Bacon" 41; our translation) is created, which generates an artistic-performative intercorporeality and a partly concordant, partly discordant polyphony and, determined by this, a haptic tactility among the actors.

The projects of *INTERCORPOREAL SPLITS*, therefore, also open up genuine questions related to polyphonic tactilities: How does the sense of body, time and space of the persons involved change during the performance? What about their embedding? How do beat, mood, tempo, duration, breath, body performance and the moving image develop in the medial in-between? How do consciousness and body "sample" time and space, and how does the technical/medial aspect remodel the being of the participants? Which complex microstructures of individual actant currents and connections occur concomitantly, reinforcing, weakening and/or erasing each other? Which complex symbioses or parasitisations are formed?[2] Time and mediality are not understood here as linear flows, but as a field of superimposed temporal structures and ecologies, which are continuously re-formed through discontinuous embodiments or milieu formations. Situation-specific forms of polyphony and (trans-medial) tactility become effective. The rhythms of a situation, a feeling, or a thought can obviously not be exactly synchronised, or assigned to one author/actor alone. Nevertheless, or precisely for this reason, specific zones of superposition and indistinguishability (Deleuze and Guattari), but also zones of distance and difference (Derrida, *Différance*), develop. Polyphonically superimposed time and space windows open up a multitude of nonpositionable spaces between event and perception. Despite and because of the technical latency times and artefacts of compression, forms of digital intercorporeality and events with the subtle nature of encounters arise among the actors. Complex structures and "machines" (Deleuze and Guattari) arise which oscillate between hearing, feeling, seeing, behaviour, experience, *being in* and *being with* the world. Transmedial

intermediate bodies and embedded soundscapes incorporate the respective material environments and a complex media ecology.

A central method and artistic stylistic device of the three projects of *INTERCORPOREAL SPLITS* is improvisation. It exposes the coexistence of all those involved, the coming about of a "small ecology" (Hörl 130; our translation). In a tension (split) between success and failure, between participation and disruption, there are moments of environmental power (Hansen), which incorporates all technical-medial, human, inanimate and environmental actants.[3] Through the artistic means of improvisation, sequences of genuine participation, on the one hand, and, on the other hand, sequences of parasitism, the interruption of affiliations, of "participation without participation" can be perceived (Hörl 130; our translation). Classical dichotomies, which still dominate conceptual determinations of polyphony and tactility, are subverted in our projects. The haptic polyphony of the "third body" between improvisation and the ephemeral qualities of contact between the actants (artist, audience, materials, places, themes) oscillates between proximity and distance, presence and absence, activity and pathos, participation and contingency. The classical scheme of hand–eye coordination, instrumentality and line-oriented and melody-oriented logic is thus supplemented and counteracted by elements of parasitic, differential and contingency-oriented tactile and polyphonic microqualities. An understanding and experience of polyphobia is required, which experiences and conceives it as "constantly in motion", always "beyond itself", as simultaneously present and absent; as a constant "differentiation", which is clearly close to Derrida's *différance*, more than there being any implication in the latter of the sense of touch and its reference to presence.[4] Just like touching, what characterises our Skype improvisations is staying in movement, surprising and being surprised, postponing and differing. Our understanding of polyphony is also oriented by this.

Figure 2: Amjad Khan with his tabla during a skype performance in an Indian insect lab.
***EMBEDDED PHASE DELAY*, 2012.**

Corporeality and Interface: Media Ecological Mediators

Today, perception and movement are increasingly conveyed in a media-ecological way. The subjective body perception is increasingly integrated into the flow of technomedial feedback processes and into a new interplay of "sensory and effector organs" (Uexküll, "Theoretical"). The body as "interface between the media" (Meyer 13; our translation) and the linearly discursive physicality of writing are supplemented by altered third bodies and forms of technocyclic bodily perception. A central question of our projects and research is therefore which trans- and intermedial forms of physicality result from their installations/projects, which medialities of distance and proximity, of place and space, arise, and which polyphonic and multi-body connection patterns can be recognised between the various actants of these novel world networks.[5]

In the three projects of *INTERCORPOREAL SPLITS* the above-mentioned controversial media-ecological phenomena are selected as a theme, listed, exhibited, made observable and put up for discussion—with special consideration of body memory. The aim of the respective interventions is the generation of artistic, medial, theoretical, but also practical application-related cognitive moments which are equally developed from observations, interviews and usage analyses of the artistic interventions. This creates a typical network of different approaches/medialities/media and their textures/textualities. For example, texts were always created for the individual projects, which the audience/listeners could hold in their hands during the performances and take home with them. This results in additional inter- and transmedial references and connections, which generate different relations and "densities" of hapticity, tactility and polyphony.[6]

The quality of perception—and thus also its polyphonic-haptic relationality—depends on its speed (Tholen), and is therefore directly dependent on clocking, including with technical instruments. Humans are fulfilled on a social level not only in "the view of the other" (Sartre, *Das Sein* 457), but also in the interactive field of view and action of ubiquitous apparatuses. Below the human threshold of consciousness, the organism is integrated into the interplay with technical interfaces and algorithms in technomobile stimulus–reaction schemes, which leads to a change in perception, our sensuality and their transmodal and intermodal relationships and performativities. These polyphonies, according to Erich Hörl and others, often work below the perception thresholds, which leads to the fact that they themselves often become no longer consciously visible/audible.

Each sense operates not only in a tactile-haptic manner but genuinely poly- and transmedially, "polyphonically"—and this is also made clearer today by the rapid availability and mixing of different media formats in the digital sphere. Each sense always presents at the same time, a) itself, b) other senses, and c) its "object", its matter of concern; hence, each sense always operates in a sensually polyphonic manner. It always *plays around* what it is talking about and around itself (Fink). The arguments about Narcissus and Echo and the mirror as a metaphor of the senses of sight and hearing are very relevant here (Konersmann). In many concepts of tactility and polyphony, however, individuals and their sensual experiences are too strongly separated from the environment and thus restricted. In this truncation, isolated subjects are confronted with isolated objects and with contacts that follow one-sided stimulus/reaction schemes or the paradigms of linearity, causality, success or concordance.[7] It is concealed that sensuality, tactility and polyphony—like the subjects and objects involved—only arise with and in the environment and are only modulated and constituted by it. Alterity and polyphony, at the heart of every touch of which Jacques Derrida (touching) and Jean-Luc Nancy (hearing)

speak, are introduced not only through the qualities of being touched by every sense, but also through the fact that "being touched", sensuality, consciousness, body and soul, subjects and objects and their polyphonic, counterphonic and disharmonic points are always first realised "in the other" and "by the other". Our projects want to exhibit this to some extent, make it tangible and, respectively, open for reflection.

BUZZ: Parasitic Interventions

Background noise is the basis of being, and parasitism is the basis of relationships. (Serres 83; our translation)

The follow-up project *BUZZ* consists of two parts: one in a South Indian insect laboratory (*Phase I*, 2014) and in a folding installation in Freiburg (*Phase II*, 2015). Both are centred on forms and concepts of the "parasitic", as it was developed above all by Michel Serres.
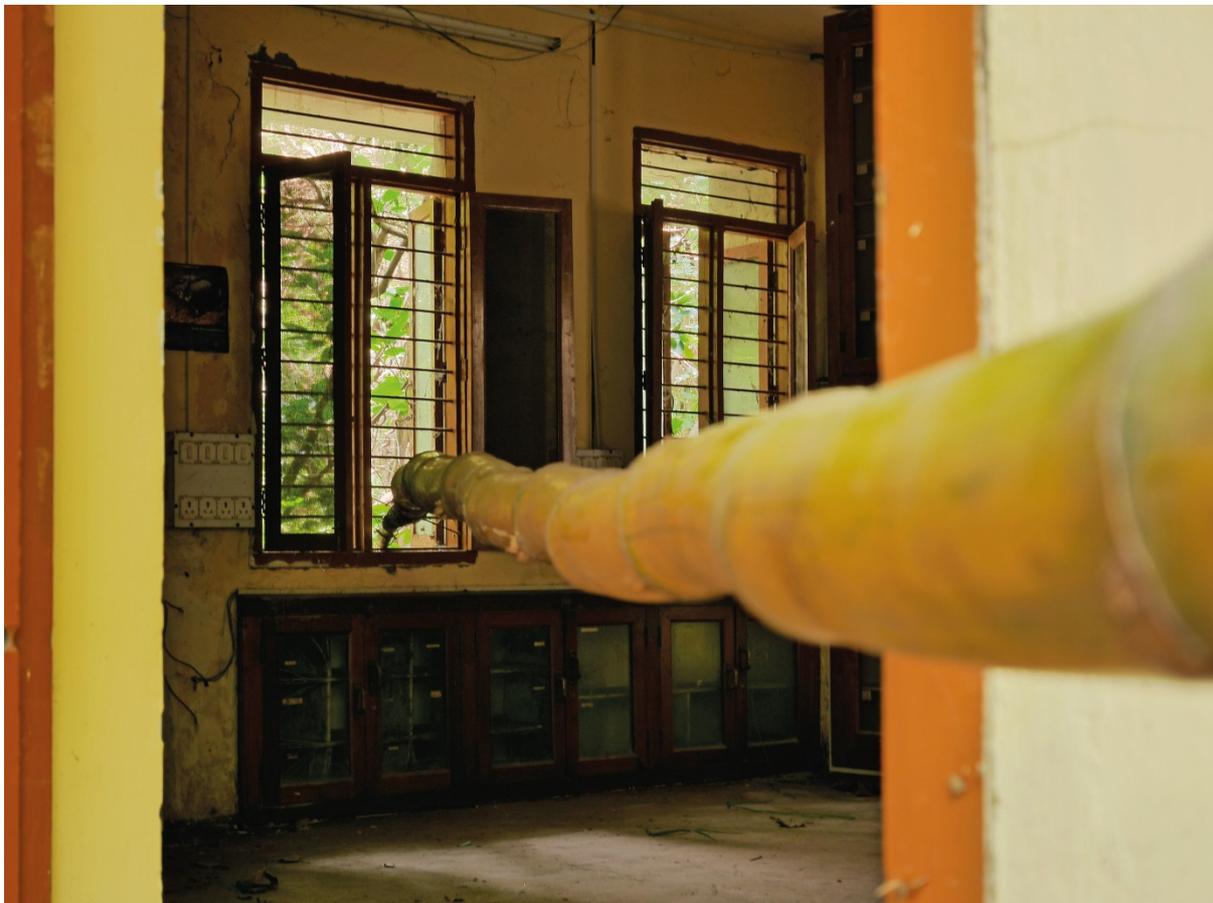
Figure 3: Parasitic intervention at the Centre for Ecological Sciences, IISc Bangalore/India. *BUZZ*, 2014.

Experimental System PHASE I – Infection/Intervention (2014)

In summer 2014, an artistic-media-ecological laboratory was established at the Indian Institute of Science (IISc) in Bangalore under the artistic direction of the authors. The laboratory investigated embodiments and observation practices of social insects and

participatory microstructures of human and animal societies using the example of the South Indian wasp *Ropalidia marginata*. The old wasp laboratory of the Centre for Ecological Sciences was converted into a temporary accommodation for *BUZZ*. Various formats such as Skype performances, installations, screenings, scientific experiments and discussions created interfaces between knowledge/theory, research practices and art. The intervention aimed to be parasitic, as a transdisciplinary metamorphosis in which knowledge productions are made observable, on the one hand, and parasitised and created for the first time, on the other hand.

Experimental System PHASE II – Dissemination (2015)

The results of *BUZZ* were exhibited and discussed in an art gallery as part of a two-week assemblage, in cooperation with the Freiburg ethnographic film festival. A temporary insect laboratory was set up in the rooms of the Freiburg gallery T66. An installation with a queen ant and three workers, visual connections and electroacoustic sounds produced interferences, and a short-wave radio link established direct contacts with Bangalore, India. Video screenings, readings and performances with scientists and artists provided an invitation to public discussion and transdisciplinary discussions.

Within the framework of *Experimental System II*, participatory processes of etho-ethnographic encounters were realised in which human and nonhuman forms of communication and sense production were staged and investigated with respect to their media and ecological embeddings. Processes of life, mutual reference, environmental education and embodiment were made sensually experienceable by overlapping artistic, scientific and philosophical approaches in which people, animals, things, theories and media were involved in different ways, which fertilised and were parasitic on each other. Both parts of the project were staged as polymedial installations and walk-throughs/exhibitions, which were to enable different forms of hyperlocal and transdisciplinary approaches, i.e. also different forms and densities of touch/haptics, distance and polyphonic references.

Ecology, Biology, the Animal/Parasite, the Media and the Haptic

Living beings can be understood as complex bodies or self-supporting systems, which are maintained in their form and structure through time through continuous metabolism (Valera 66). Through this metabolism, the living being realises its relationship to the world by creating its specific environment through an autopoietic structure (Fuchs 115). The cell membrane is not only a border, but also a zone of connection (Fetzner and Dornberg, "Intercorporeal" 53). As membranes continually mediate between the living being and the environment, a superordinate ecological overall structure emerges. This overall system reconfigures itself with every interaction between organism and environment in the form of permanent, but also failure-prone, parasitic coevolutions. For the insect researchers at the Indian Institute of Science (IISc) in Bangalore, these views are commonplace.

In the computer society, according to the thesis of the sociologist Dirk Bäcker (9), ecology can no longer be understood as a superordinate, infinite order with an overall sense, but only as a relation of proximity between heterogeneous orders. Whereas Jakob von Uexküll still understands the connections between organisms and their environments as "symphonies of meaning" ("Theoretical" 387) of a nature that "plays" itself and at the same time listens, today nature/culture is thought to be much less symphonic, but more small-scale, susceptible to disturbance and more materialistic. Thus, textures, concepts and realities of polyphony are

raised and selected as themes in a different manner. It is no longer about cybernetics as the comprehensive system or the "large single circuit with stable circuits" (Lyotard 37; our translation), but rather about the many small networks of relationships in a horizon of indeterminacy and finiteness. Networks are supplemented or criticised by meshworks (Ingold). The concept of relation is subverted, supplemented and challenged by that of mixing, a (partly disordered, "dark" or "wild") polyphony and its tactilities and their parasitic valences. Interest in a *new materialism* and *object orientation*, beyond the dichotomy of idealism and realism, is growing and pointing in a similar direction (Morton; Harman, *Immaterialism*).

According to Baecker, the structure of the society rising with the computer will be "more radical than we can imagine up to now, an ecological order" (225; our translation). With reference to Jakob von Uexküll, he continues: "The ecological principle no longer conceives the structures of the world in terms of a superstructure or even an 'ecosystem', the misleading term which is used, but in terms of the relationship of mere proximity, i.e. the loose coupling between the various organisms in their niches" (225; our translation). The interaction or metabolism of living beings with their environment and also with machines and media must therefore be understood as a diverse, coevolutionary process of countless and simultaneous micro-touchings and parasitic settlements, embeddings or extinctions.

Within this framework of reference, queer polyphony and its distance and crossover performances become an important principle of understanding. As soon as "sensing" and "effecting" (Uexküll) extend into the space, symbols/embodiments of time and space are generated. They either mediate the polyphonies of perceptions, on the one hand, and, on the other hand, of kinaesthesia, or execute them themselves as (the ability/possibility for) memorisation and action. The philosopher and physicist Karen Barad differentiates this nondialectic relation from interactive interactions and calls it intra-action. In Barad's theory, objects or phenomena do not exist outside or before an interaction, but emerge from "intra-actions". The concept or reality of "notness/nothingness" (German *Nichthaftigkeit*) also plays an important role here (Guzzoni).

The central proposition of Helmuth Plessner, "the organism as a whole is only half of its life" (129; our translation), which is intended to express this, and which the dancer in our *PEAU/PLI* project performed again and again (Fetzner and Dorberg, *Intercorporeal* 94–127), also applies to the sense of a haptic/non-haptic polyphony and its interweaving into the other senses on the one hand, and into the environment involved on the other. Even the most rudimentary experiences of space and time or of differences convey not only presence, but more or less explicitly also alterity/difference/absence. Thus, also the animal/the bestial— paradigmatically detailed by Derrida (*Das Tier*)—becomes a sign of the experience of possible alterity and a critic of any absolute "hapto metaphysics". Animals and their polyphonic "worlds" also live on the border of withdrawal. They experience themselves to some extent also as "different" through relating to the "other" and through the sensory/polyphonic experience of being touched.

Phenomena and meanings of parasitic/animal and polyphonic references exchange, mix and influence each other in the age of the omnipresence of the digital/smartphone; the touchscreen becomes a haptic-tactile, poly-valent window to the inside and the outside: the inter-face.[8] We are dealing here with a polyphonic physicality and a sensory system that is skin, ear and window at the same time, but permanently endowed with infiltrating infectious qualities. The classical typology of touch as contact/learning and of polyphony as being oriented by the line, the counterpoint or a return is replaced by a new, disturbance- and surprise-

oriented, not-like—*nichthaften* (Guzzoni)—type of haptics, polyphony and the generation of experience and "knowledge". This fundamentally changes the relationship between the surface and depth of phenomena, which is also central to the sciences[9] and the meaning of emotions.[10]

WASTELAND: Polyphony in the Anthropocene

> The universe is composed both of matter and information, which are inseparable in their relationship with each other. (Serres 197; our translation)

The *WASTELAND* project dealt with the question of how matter, organisms and geographies in the age of the technosphere can be thought of as a relational connection on a level with the human being. This artistic research focuses on the use of resources in relation to two waste recycling systems in Cairo and southern Baden.

Figure 4: The philosopher Graham Harman about new materialism in the middle of waste, smell and noise in the Garbage Village of Cairo. *WASTELAND*, 2016.

Object-Relational Relations

The eruption of the Tambora volcano in April 1815 had unexpected consequences: megatonnes of dust particles were distributed around the earth by air currents, turning 1816 into a "year without summer" (Scherer 227; our translation). In addition to failed harvests, famines and political revolts, the eruption also resulted in cultural artefacts such as the grandiose evening atmosphere in William Turner's paintings. In 1844, the biologist Christian Ehrenberg described the transcontinental exchange of trade wind dust interspersed with microorganisms as a "Blood Rain". Equivalent to this, in the Anthropocene there are man-made particle streams such as nuclear fallout, plastic islands in the Pacific and the atmospheric

concentration of CO2, thus bringing the tactile-haptic (and polyphonies determined by it) "closer to us"—things closer to humans, but also things closer to things.[11]

The artistic research project *WASTELAND* produces "black noise" in the sense of Graham Harman, i.e. particle streams at the edges of our perception, and investigates the way in which resources are dealt with.[12] The project staged the affective, tactile-haptic, rational and medial data streams, respectively smart dust and their polyphonic materialities, to form new, different patterns ("Smurtdust"). In this way, the project aims to surpass the normal patterns of thought and action limited to recycling quotas, resource efficiency and energy saving, and move towards the system of waste.

The Anthropocene and Its Waste

The influence of man on the history of the earth, which is also studied in depth in geology and which is referred to as the Anthropocene, is mainly determined by the output of his technologically potentised metabolic rate. Waste production is becoming man's greatest power in shaping the planet and footprint. But what does it mean to describe the greatest creative force of mankind as waste and to regard the Anthropocene as the (unintentional, unconscious, unused, unavoidable, dangerous) waste product of industrial and cultural transformation processes? In detail, any residual material can be analysed precisely, but what turns a material into waste? Is every product not a kind of emission that is finely distributed in the consumer environment or on earth?

Waste is not only a thing or object, but also a relational network, a result of various attributions and reactions. The coding of waste as something that is "no longer useful" only exists in anthropogenically influenced systems. Some paleo-anthropologists see waste as the decisive indicator for the reconstruction of the beginning of human life. In this respect, garbage is the seal of the Anthropocene par excellence, a highly complex culmination of social, individual, scientific, economic and cultural transactions.[13]

WASTELAND conceptualises waste in a way that does not conceptually restrict the Anthropocene in the thought pattern of a catastrophically anticipated geological segmentation of a fatalistic purpose-rational use of resources. The return of waste with all its object-like, chemical, philosophical, olfactory, digitised "data" (data = facts) opens up the possibility of understanding the system of material flows beyond the illusion that a "construct" like waste could be eliminated from the Earth's overall balance space. Perceptually, ethically and/or politically, discussions relating to the Anthropocene are always about letting ourselves be touched by these changes (and the objects associated with them) before we are completely cluttered. The human sensory organs and their sense of polyphonic intra-actional interactions are not or only to a limited extent receptive to some phenomena (Fetzner and Dornberg, "*WASTELAND*").

Two Waste Recycling Systems: Cairo and Eschbach

Epidemic involves terms that are entirely heterogeneous: for example a human being, an animal, and a bacterium, a virus, a molecule, and a microorganism. (Deleuze and Guattari 266–7)

Around 40,000 people live in Mokattam Village, Cairo. Since the 1940s, they have been operating an informal waste recycling system in the megacity on the Nile. The Zabbaleen

(Arabic زبالين, "garbage people", also translated as "garbage collectors") recycle the waste they collect. They sort about 10,000 tonnes of waste daily by hand in their homes. An important factor in the recycling system is pigs that eat the organic waste and serve as livestock for meat supply. The animals' excrement is delivered to a composting plant in a Cairo suburb.

The situation in Eschbach, Germany shows a completely different picture. There, at the foot of the Black Forest, stands a state-of-the-art waste incineration plant. Waste processing is highly automated and is handled exclusively by machines. The industrial plant burns 170,000 tons of waste annually, generating fifteen megawatts of electricity and slag for use in road construction. Within a radius of five kilometres there is a nuclear power plant and accommodation for 450 refugees.

The waste incineration plant in Eschbach, being the central European state of the art for strict separation of waste and humans, achieves a recycling rate of 30%. The waste people of Cairo, for whom waste is their ecosystem, recycle over 90% of the material in extreme poverty and often intolerable hygienic conditions.

Media Ecological Meshwork

> The earthed, unearthed and underground nature of media determine what is visible and what is invisible. This is a question of power relations and disputed territories. The earth is part of the media both as a resource and as transmission. (Parikka 34)

Relational networks, waste, objects and the parasitic form centres of contemporary media ecology. What material and informational connections exist between different milieus? What kind of exchange of things, stories, rhythms and particles takes place there? How involved is an observer in this metabolism when he no longer looks *at things* but rather lives interwoven *with things*? This interweaving also involves and questions the spheres of haptic tactility as well as polyphony, and at the same time creates new forms thereof.

WASTELAND's research focuses on the global exchange of energy, objects and narratives. The actants and actions embedded in both environments connect the things/material with the informational. *WASTELAND* explores the aesthetic dimension of this structural coupling as a comparison between Mokattam Village, Cairo and the waste incineration plant in Eschbach, Baden. The installation represents an *experimental system* (Rheinberger) for the production of new insights and aesthetic experiences; an experimental system that, like the complex realities it deals with, can be understood as a *struction* in Jean-Luc Nancy's sense, as

> uncoordinated simultaneity of things or beings, the contingency of their co-memberships, the dispersal in the proliferation of aspects, types, forces, tensions and intentions (instincts, impulses, projects, zeal). In this abundance no order asserts itself over the other: they all—instincts, reactions, connections, equilibria, catalysis, metabolism—seem to be destined to become entangled, to mutually grasp each other, to dissolve each other or to mix and confuse each other. (Nancy, "Struktion" 62; our translation)

Relational networks, waste and the parasitic also stand for a new ontology and a new cybernetics in which the object-like and the medial interact, though not always. They also stand for a bio-object-like medial ecology, which on the one hand produces abundance and

complexity and, on the other hand, disturbances, extinctions and contingencies. These always have or induce certain forms of haptics/tactility and polyphony.

48h WASTELAND Exhibition

Data, thoughts and bacteria do not sleep. An exhibition accompanying the project in 2016 at the Kommunales Kino Freiburg was therefore open day and night for forty-eight hours. A newspaper, film screenings, seminars and an interactive documentation of the project and its genesis contributed to the transmedial and hyperlocal character of artistic research. In addition to a sound installation with live data from the garbage city in Cairo and the Eschbach waste incineration plant, microorganisms from both locations were examined with respect to their sensory abilities in a temporary bio-laboratory. Webcams transmitted fleeting impressions of people, animals and machines from both environments—the waste city in Cairo and the waste incineration plant in Eschbach. *48h WASTELAND* transformed these data into a sensual-auditory, polyphonic experience for visitors.[14]

A microphone registered the ambient noises in the exhibition room, which are also interpreted by the programming. An evening performance with improvisation musicians took place at the opening. Personal stories, video assemblages and microorganisms from the places involved complemented the hyperlocal exchange process. A *hodological* pathway and space were created (Bollnow) that mixed people, animals, things, media and concepts/theories and their experience/reflection and placed them on one level. Through transmedial and transmodal connections, polyvalent sensualities and the "sense" (the rationalities) of both haptic tactility and a polyvalent audiovisuality, which are processually inherent to every single (other) sense and also to consciousness/thinking, were sparked and used.

The Polyphonic Tactility of Interactive Web Documentation

The installation structure of our works creates a multilinked touch and "polyphony" through the connection of the physical, sensual and cognitive levels of experience, in which a wealth of different levels and references play a role together; Deleuze and Guattari speak of "strata" and "structures" (*Thousand*). Here it is a matter of *living in* our house (the earth and in the Anthropocene) in a multimedial, sensual and cognitive way, of making the floors / rooms / interiors / objects, and at the same time their contexts, atmospheres and poetics, sensually and aesthetically perceptible. In our last two projects, the format of interactive web documentations and additionally in *WASTELAND* that of the 360° videos play a central role in parasitic methodologies (Fetzner and Dornberg, "*WASTELAND*"). Both formats bring forms of haptic-transmedial polyphonies into play and try to create a completely unique relationship with them.

Interactive web documentations (or i-docs) combine narrative-linear and nonlinear formats (such as images, music, diagrams, text fragments, comments, etc.) and make them playfully accessible to the website user. This opens up new stratifications and polyphonic ways of experience, which depend strongly on the respective user and his/her interaction experiences in the i-doc medium. Through these, more embodying experiences with the documented become accessible. Sandra Gaudenzi therefore speaks of i-docs as *living documentaries* (*Living*; "Strategies").

We followed Gaudenzi's categorisation of interactive documentaries: the conversational mode, the hypertext mode, the experiential mode and the participatory mode,

which we respectively modified into quantitative and qualitative, immersive-conversational, explorative-consumptive, embodying-enactive-experimental and participative-interactional levels or elements. In our current research *DE\GLOBALIZE* we explicitly develop and explore an additional "improvisational mode".

Figure 5: Parasitic Workshop and Interviews at CCS/IISc in March 2018; interviews with biologists and experts in the field of the critical zone. *DE\GLOBALIZE*, 2018.

Within the framework of our projects, the i-docs created serve several purposes. They are intended to: 1) document these on the web, 2) provide a new way to experience the projects, 3) contribute to transdisciplinary artistic research on them, on the one hand, and (4) contribute to the further development of artistic research methods, on the other hand.

The i-docs of our projects are used to document what can only be briefly outlined here. They are not only the substantive actants of our project, but also methodical/formal components, procedures as well as transmedial and transdisciplinary references and structures that are central to our projects in terms of content and form, and to our artistic research as well. They can thus be addressed on a level of multisensory observation or "second-order performance" (Fetzner and Dornberg, *Parasitic*; *WASTELAND*).

The multisystemic-relational, interactive character of our i-docs creates prototypical references to the whole project, its material, sensual, aesthetic and cognitive actants and to its contexts/research questions (horizontal axis) through the navigation of the user. Options, breaks, surprising and immersive moments as well as the inexhaustible and inestimable complexity of the whole create density, deepening and a specific form of eventfulness and presence (vertical axis) at the same time. The interaction of both levels generates a specific form of polyphonic performativity and haptics/tactility that includes both informational, affective and aesthetic qualities oscillating between the poles of chance/serendipity and

repetition/repeatability/documentation. This tension is central not only to interactive web documentations, but also to all artistic processes. This supports our thesis that interactive web documentations—especially if the polyphonic-haptic oscillation between all these levels in the application is made metacommunicative, observable and open for comments on several related levels—are particularly suitable not only for documentation but also for research into artistic processes.

360° Video Perspective and the View of Things

360° videos, as we use them in *WASTELAND*, unfold a completely independent form of haptics/tactility and embodimental polyphonic references in the rotation of moving images. They mediate interactively or, perhaps, inter- and intra-actively. In so doing, they convey our para-panoramic interweaving into things/objects/environments and thus create new topologies and relationships of proximity. The navigation in the 360° videos creates a kind of joint improvisation between the users and the scenes and situations depicted. A sometimes-dizzying feeling is produced. The possibility of interaction via the rotation of the 360° ball using a leap motion controller or touchpad places a kind of virtual eyeball at the fingertips of the user. Experiences of "haptic seeing" (Deleuze, *Bacon*) may occur, as can an *interplay* of free forces, of players and their environments, of objects and subjects or points of view, but also with the material actants, such as microphones, cameras and other technical equipment, which are also important in our projects.[15]

Inter-Objectivity, i.e. the relationship between things, is not only theoretically discussed here, but also located, shown and experienced through images/objects/films.[16] The user's gaze jumps from object to object. The playful and at the same time embodying interaction experience mixes objects and intuitions/views etc. into a transmedial milieu that can fray at the edges to black noise. It processes a rhizomatic-haptiform proliferation, close to the objects and their unpredictability. Things and their polyphonic intra-action are coming closer to us.

In our experience, 360° videos create forms of cognitive-symbolic and (multi)media "hunger", an affective-cognitive curiosity that, through ever-new experiences of embodiment, creates diverse, polyphonic relations aimed at wholeness and disparity/alterity at the same time. In this way, they not least raise the issue of the *hors-champ*, the invisible field of the world depicted in a new film language. The cinematic *off-screen* thus becomes a space of possibility for the user of manifold object-relational or inter-objective connections and arbitrary montages and polyphonies that can no longer be completely controlled. In this way, new zones of indistinguishability, rhythms, atmospheres, new forms of tactility arise. They form a stream of facts/data that generates new audiovisual or transmedial topologies and new forms of polyphonic references outside any central perspective, beyond classical subjects or objectivity.

As part of *WASTELAND*, a conversation with the philosopher Graham Harman took place amidst the plastic sorters in Garbage City in Cairo—both a film aesthetic and an ontological experiment. Harman represents an object-oriented philosophy that wants the world to think less anthropocentrically. He assumes that perception is always accompanied by distortions and translation errors. There is not only a gap between man and object, but rather between all objects and entities. These are autonomous, both fictitious and real, physical and artificial, both simple and composite. The encounter with Graham Harman in the middle of the garbage city was documented with video, both 360° and conventional.[17] It stages the object-like conditions of human actants (paid workers sorting the waste; cameramen recording the

conversation and the two conversation partners), the scenic objects and concepts (philosophical and material value chains of the situation, microphones and cameras, mountains of plastic waste, shredders processing plastic into fine granulate, etc.), and, not least, the plastic bottle with which Harman enters the scene and leaves it again—without abandoning it in the garbage. The manifold polyphonic relationships of the objects and actants and their a-relational fractures can be experienced and felt affectively by the viewer in the 360° video—like a hall of mirrors of embodiment, without any clear point of view being predetermined.

The difference-forming simultaneity of 2D and 360° video in the interviews with Harman and the two workers expands the perception possibilities of the user. 360° videos create new images and montages as part of the *WASTELAND* installation and as part of its artistic processing in the interactive documentation. In Deleuze's sense, we do not only deal with audio-visual artefacts, but also real situations and movements (*Cinema 1*; *Cinema 2*). These cannot be seen primarily as Deleuzian movement-images, but as acting time images. These images do always have a haptic–tactile component, which on the one hand produces polyphony and, on the other hand, works against it. They have a more sensory, direct effect on the nervous system (Deleuze, *Logic*) by stopping the sensorimotor functions of the movement image in parts and forming, for example, faces, crystals or emotions; in other words, their own formats and textures of the haptic, new formats of polyphonic possibilities for experience and interaction.[18]
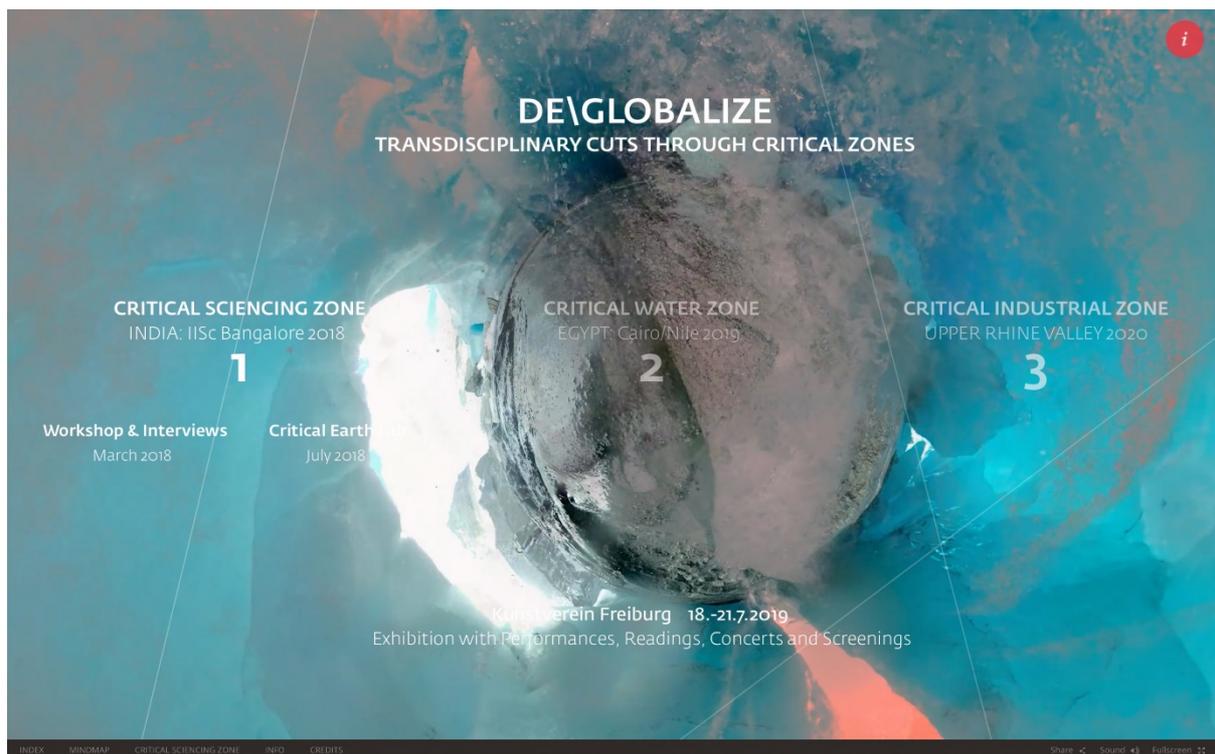

Figure 6: A melting glacier in 360° on the search for a zero-person perspective. *DE\GLOBALIZE*, 2018. http://deglobalize.com.

DE\GLOBALIZE

The global evokes the notion of a totality as a whole, in an indistinct integrality. While mondialisation would rather evoke an expanding process throughout the expanse of the

world of human beings, cultures and nations. Mondialisation gives a different indication than of an enclosure in the undifferentiated sphere of a unitotality. (Nancy qtd. in Fetzner and Dornberg, *DE\GLOBALIZE*)

Finally, we wish to detail our current project cycle *DE\GLOBALIZE*, a study about the "Critical Zone" in cooperation with the anthropologist Bruno Latour related to exhibitions at Kunstverein Freiburg (2019) and at the ZKM Karlsruhe (2020).

Latour contrasts ontologies and epistemologies of globalisation with those of earthliness, of the "terrestrial" ("Terrestrial"). While the former are understood to operate with "matters of fact", to provide distance and enable control, the latter create proximity and connectedness, "matters of concern" and "matters of care". The former deny the borders of our planet, and thus the politically central issues of global warming and the Anthropocene, while the latter aim to respond politically to these phenomena, out of concern for our finally vulnerable lives. Life on our earth becomes "critical" and "critical zones" expand or become central forms of scientific or political references (Latour, "Advantages").

The concept of critical zones is an interdisciplinary research field within the earth sciences, a critical zone being the skin layer around the globe in which complex interactions involving soil, water, air, and living organisms regulate the natural habitat. *DE\GLOBALIZE* consists of ethnographic and media ecological strolls and three agential cuts through Critical Zones in India (2018), in Egypt and in Germany (2019).

Our artistic research renegotiates the grammar of space, borders, scale in order to "de\globalize" the notion of "the global". It thereby focusses on three key questions: 1) How to think, fold and answer the earth in a de-globalised topology? 2) How to re/present alterities, entanglements and relational *references* through critical zonings in the parasitocene? 3) How to narrate critical zonings in nonlinear, improvisational, transmedial cuts?

All three questions bring together approaches and issues from our previous research projects, which address embodiment, embedding, en-/inter/intra-acting and a polyphonically operating "extended mind" or "extended mediality" and aim to make it possible to experience them anew.

The research project *DE\GLOBALIZE* is situated at the border between critical zone sciences, biology, anthropology and media ecology and aims to research their relations of proximity, symbioses and critical overlaps and conflicts. Our artistic, medial and philosophical techniques, therefore, also use reflexive and diffractive methods and try to exhibit these and make them visible and researchable.

Critical and zoning processes can be found not only in environmental studies or biology, but also in science in general. Empirical investigations can be understood as critical and zoning practices on the basis of varying, planned observations and systematic experiments. In contrast to the information theory of Claude Shannon, for us confusion, criticising and zoning are dominant in every relationship. The focus is not on the transmitter/receiver relationship, but on the polyphonic relationship between communication and noise. The connections of body and community form a network or meshwork in which phenomena and knowledge are intertwined. These webs are not really conceivable without "noise", without overlaps, interferences, and the (more or less) critical process of establishing and passing thresholds.

A central aspect of our projects is their character of improvisation, of uniqueness, of the performative. In this context, the relationship between activity and passivity/pathos in the framework of multiple medial ecologies becomes particularly clear and particularly critical. In our projects, doing and the suspension of doing, independent activity and being determined by the other, with quite specific forms of gains and loss, are a central component of planning, performance, theoretical and practical intervention as well as artistic research documentation and processing. It is precisely the interactivity of our artistic means—lecture performances, improvisation, use of 360° video and interactive documentation formats—which point towards the tensions of activity *and* passivity, of predictability *and* chance/cancellation, and of documentation *and* art/essay. These critical tensions and their polyphonic relations can and should be examined and made accessible to research precisely there, in the artistic and medial format itself.

Notes

1 "Polyphony" in music refers to multi-voiced, more-or-less common melodies or tonal sequences which comment on each other or contrast with each other. In literary analysis, the term stands for a style which counteracts the dominance of the author and his perspective. The characters in a polyphonically designed novel do not act as the mouthpiece of the author or represent the latter's viewpoint, but receive their own existences and ideas, which are not entirely the same as those of the author or those of other characters. Haptic is generally understood as referring to the active component of the sense of touch, and tactile as referring to the passive component. Between the two there however is a plethora of interrelations, both in empirical/substantive and in conceptual terms. In our projects there is a wealth of cross- and transmodal relations between the polyphonic and the haptic/tactile, which are also to be outlined in this article (Grunwald).

2 Especially in the artistic research *BUZZ* (Fetzner and Dornberg, *BUZZ*).

3 In this article, references to people in the masculine or the feminine form will be used for reasons of readability only, and do not exclude the other sex.

4 Derrida speaks of "haptometaphysics" (Berühren).

5 The concept of the "third body", which is important for us, can be extended into the concept of a poly-body or extended body. See, among others, Froese, Theweleit and Fuchs.

6 On the conceptual differentiation of intermediality and transmediality, which we unfortunately cannot deal with in depth here, see Wieczorek.

7 For instance, this was still the case for Grunwald ("Haptics").

8 The face has specific haptic or affective qualities/powers. It invalidates in part the mechanisms of the movement image, and creates the transition to images of emotions and time (Deleuze, *Cinema 2*).

9 "If tactile thought has to give up the metaphysical division between the being as a core and the phenomenon as an envelope in which the subject always remains at the surface, it opens up

to a different depth, to a historically layered surface" (Diaconu 77; our translation). This also applies to the polyphonic.

[10] Hartmut Böhme considers all emotions as "descendants of the sense of touch" (194; our translation).

[11] Timothy Morton epitomises this with the reality (not the metaphor) of the rear-view mirror: "Objects may be nearer than they appear" (15). The Anthropocene goes together with interest in a New Materialism and an "object-oriented philosophy", as well as cyborgs between nature (human and nonhuman actants) and machines/technology. It is therefore inadequate to attribute an anthropocenic attitude or direction even to the strategic term "Anthropocene".

[12] Black noise is a concept of the philosopher Graham Harman, who is actively involved in *WASTELAND*. Harman defines black noise as "muffled objects hovering at the fringes of our attention" (Guerrilla 183), or, to use William James's expression, "at the fringes of consciousness" (149).

[13] Transactions that are, however, object-related: as Harman emphasises, objects do not dissolve either in their components or in their consequences. They remain "objects": different, unpredictable, for example sometimes larger and sometimes smaller than expected; sometimes they explode, and sometimes they sleep (Immaterialism 15). Haptic tacility points to this dimension, which is also important for an object-oriented philosophy: inter-objective/intra-actional relationships exist or do not exist (are missing) and even if they exist, they are not always perceived by the creature/other object or are relevant to it. Both the haptic/tactile and the polyphonic carry out-processing in an "object-related" manner: in a limited way, with certain thresholds, sometimes working and sometimes not working.

[14] *48h WASTELAND* focussed on the polyphonic tactility of things amongst themselves. The data of the webcam do not carry out any unknown algorithmic procedures. The sensory data of the webcams were transferred into sound directly via 0/1 signals, and hence translated into a polyphonic acoustic experience.

[15] In our current research project *DE\GLOBALIZE* we are researching topological transformations of 360° video.

[16] In the terminology of object-oriented philosophy, things, institutions, media and humans are all objects.

[17] See the result under the following URL: http://harman.metaspace.de.

[18] With reference to the paintings of Bacon, Deleuze describes this in the following manner: "If we consider the painting in its process, there is a continual injection of the manual diagram into the visual ensemble, a 'slow infiltration', a 'densification, a 'development', as if one gradually progressed from the hand to the haptic eye, from the manual diagram to haptic seeing" (97). The relationship between the hand and the eye and the latter's specific hapticity is also evident in the 360° videos.

References

Anderson, Benedict. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Revised and extended ed., Verso, 1991.

Aston, Judith, Sandra Gaudenzi, and Mandy Rose, editors. *I-Docs: The Evolving Practices of Interactive Documentary*. Columbia UP, 2017.

Baecker, Dirk. *Studien zur nächsten Gesellschaft*. Suhrkamp, 2007.

Barad, Karen. *Agentieller Realismus. Über die Bedeutung materiell-diskursiver Praktiken.* Translated by Jürgen Schröder, Suhrkamp, 2012.

Böhme, Hartmut. "Der Tastsinn im Gefüge der Sinne." Tasten, edited by Uta Brandes and Claudia Neumann, Steidl, 1996, pp. 185–210.

Bollnow, Otto. *Mensch und Raum*. Kohlhammer, 1963.

Dawkins, Richard. *The Extended Phenotype*. Oxford UP, 1982.

Deleuze, Gilles, and Felix Guattari. *A Thousand Plateaus.* Translated by Brian Massumi, Minnesota UP, 1987.

Deleuze, Gilles. *Cinema 1: The Movement-Image.* Translated by Hugh Tomlinson and Barbara Habberjam, U of Minnesota P, 1986.

---. *Cinema 2: The Time-Image*. Translated by Hugh Tomlinson and Robert Galeta, U of Minnesota P, 1989.

---. *Francis Bacon: Logik der Sensation*. Wilhelm Fink, 1995.

---. *The Logic of Sense*. Translated by Mark Lester and Charles Stivale, edited by Constantin V. Boundas, Columbia UP, 1990.

Derrida, Jacques. *Berühren–J.L. Nancy*. Translated by Hans D Gondek, Brinkmann U. Bose, 2007.

---. *Das Tier, das ich also bin*. Translated by Markus Sedlaczek, Passagen-Verlag, 2010.

---. *"Die différance." Postmoderne und Dekonstruktion. Texte französischer Philosophen der Gegenwart*, edited by Peter Engelmann, Reclam, 1990, pp. 76–113.

Diaconu, Madalina. *Tasten-Riechen-Schmecken: Eine Ästhetik der anästhesierten Sinne*. Königshausen & Neumann, 2005.

Dornberg, Martin. "Die zweigriffige Baumsäge. Überlegungen zu Zwischenleiblichkeit, Umweltbezogenheit und Überpersonalität." *Grenzen der Empathie. Philosophische, psychologische und anthropologische Perspektiven*, edited by Thiemo Breyer, Wilhelm Fink, 2013, pp. 239–59.

---. "Dritte Körper: Leib und Bedeutungskonstitution in Psychosomatik und Phänomenologie." *Korporale Performanz. Zur bedeutungsgenerierenden Dimension des Leibes*, edited by Arno Böhler, Christian Herzog, and Alice Pechriggl, Transcript, 2014, pp. 103–22.

Ehrenberg, Christian Gottfried. *Passat-Staub und Blut-Regen*. Akademie der Wissenschaften, 1849.

Fetzner, Daniel, and Martin Dornberg. "Anthropozän: auf Aughöhe mit den Dingen*". 48h WASTELAND,* Event Programme, 2016, pp. 11–15.

---. *BUZZ: Parasitic Ecologies*. 2014–2015, parasite.metaspace.de. Accessed 2 May 2018.

---. "*BUZZ – Parasitäre Ökologien*". 2015, www.metaspace.de/buzz/zeitung.pdf. Accessed 2 May 2018.

---. "*DE\GLOBALIZE*: Agential Cuts Through Critical Zones in Science and Other Sediments – Kabini, Nile and Rhine." 2018, www.metaspace.de/Main/Deglobalize. Accessed 2 May 2018.

---. editors. *Intercorporeal Splits. Künstlerische Forschung zur Medialität von Stimme, Haut und Rhythmus*. Open House Verlag, 2015.

---. *EMBEDDED PHASE DELAY*. 2012–2013, www.metaspace.de/Main/Epde. Accessed 2 May 2018.

---. "On the Potential of Interactive Web Documentary for Artistic Research". *i-docs.org*, 2016, i-docs.org/2016/06/27/on-the-potential-of-interactive-web-documentary-for-artistic-research. Accessed 2 May 2018.

---. "Partizipatives Parasitieren. Zum methodischen Potential interaktiverWebdokumentationen in der künstlerischen Forschung." *Augenblick. Konstanzer Hefte zur Medienwissenschaft*, *65/66*, edited by Oliver Fahle, Beate Ochsner, and Anna Wiehl, Schüren Verlag, 2016, pp. 40–56.

---. *PEAU/PLI*. 2012–2014, pp.metaspace.de. Accessed 2 May 2018.

---. *VOICE VIA VIOLIN*. 2010–2011, www.metaspace.de/Main/CairoRoundabout2. Accessed 2 May 2018.

---. *WASTELAND: Comparison of Two Waste Management Systems in Cairo and in Southern Baden*. 2015-17, waste.metaspace.de. Accessed 2 May 2018.

Fink, Eugen. *Spiel als Weltsymbol.* Verlag Karl Alber, 2010.

Froese, Tom, and Thomas Fuchs. "The Extended Body: A Case Study in the Neurophenomenology of Social Interaction." *Phenomenology and the Cognitive Sciences*, vol. 11, 2012, pp. 205–35.

Fuchs, Thomas. *Das Gehirn als Beziehungsorgan*. Kohlhammer, 2007.

Gaudenzi, Sandra. *The Living Documentary: From Representing Reality to Co-Creating Reality in Digital Interactive Documentary*. PhD thesis, 2012, research.gold.ac.uk/7997/1/Cultural_thesis_Gaudenzi.pdf. Accessed 9 Sept. 2018.

---. "Strategies of Participation: The Who, What and When of Collaborative Documentaries." *New Documentary Ecologies*, edited by Kate Nash, Craig Hight, and Catherine Summerhayes, Palgrave Macmillan, 2014, pp. 129–48.

Grunwald, Martin. "Haptik." *Werkzeug/Denkzeug*, edited by Thomas Schmitz and Hannah Groninger, Bielefeld, 2012, pp. 95–126.

Guzzoni, Ute. *Nichts*. Verlag Alber, 2014.

Hansen, Mark. "Medien des 21. Jahrhunderts." *Die technologische Bedingung*, edited by Erich Hörl, Suhrkamp Verlag, 2009, pp. 365–409.

Harman, Graham. *Immaterialism, Objects and Social Theory*. Polity, 2016.

---. *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things*. Open Court, 2005.

Hörl, Erich. "Tausend Ökologien." *The Whole Earth. Kalifornien und das Verschwinden des Außen,* edited by Diedrich Diederichsen and Anselm Franke, Sternberg Press, 2014, pp. 121–30.

Ingold, Tim. *The Life of Lines.* Routledge, 2015.

James, William. *Psychology: Briefer Course*. Harvard UP, 1984.

Juhasz, Alexandra. "Ceding the Activist Digital Documentary." *New Documentary Ecologies: Emerging Platforms, Practices and Discourses*, edited by Kate Nash, Craig Hight, and Catherine Summerhayes, Palgrave Macmillian, 2014, pp. 33–49.

Konersmann, Ralf. *Lebendige Spiegel. Die Metapher des Subjekts*. Fischer, 1991.

Latour, Bruno. "Some Advantages of the Notion of 'Critical Zone' for Geopolitics". *Procedia: Earth and Planetary Science*, Vol. 10, 2014, pp. 3–6.

---. *Das terrestrische Manifest*. Suhrkamp 2018

---. "For a Terrestrial Politics: An Interview with Bruno Latour by Camille Riquier." *Eurozine.com*. 6 Feb. 2018. www.eurozine.com/terrestrial-politics-interview-bruno-latour. Accessed 2 May 2018.

Lefebvre, Henry. *Rhythmanalysis: Space, Time and Everyday Life*. Translated by Gerald Moore, Continuum, 2004.

Lyotard, Jean-François. *Économie libidinale*, Les Éditions de Minuit, 1974.

Merleau-Ponty, Maurice. *The Visible and the Invisible*. Translated by Alphonso Lingis, Northwestern UP, 1968.

---. *Phenomenology of Perception*. Translated by Colin Smith, Routledge & Kegan Paul, 1962.

Meyer, Petra Maria. "Der Körper als Interface zwischen den Medien im Gegenwartstanz." *TheorieTheaterPraxis*, edited by Hajo Kurzenberger und Annemarie Matzke, Theater der Zeit, 2004, pp. 286–96.

Morton, Tim. *Hyperobjects: Philosophy and Ecology after the End of the World*, U of Minnesota P, 2013.

---. *Realist Magic: Objects, Ontology, Causality*. Open Humanities P, 2013.

Nancy, Jean Luc. *Singulär plural sein*. Translated by Ulrich Müller-Schöll, Diaphanes, 2004.

---. *Zum Gehör*. Translated by Esther von der Osten, Diaphanes, 2010.

---. "Von der Struktion." *Die technologische Bedingung*, edited by Hörl, Erich, 2011, Suhrkamp Verlag. pp. 54–72.

Parrika, Jussi. *Insect Media*. Minneapolis. 2010

Plessner, Helmuth. *Die Stufen des Organischen und der Mensch. Gesammelte Schriften IV*, Suhrkamp Verlag, 1981.

Rheinberger, Hans-Jörg. *Experimentalsysteme und epistemische Dinge. Eine Geschichte der Proteinsynthese im Reagenzglas*. Wallstein Verlag, 2001.

Sartre, Jean-Paul. *Das Sein und das Nichts*. Translated by Traugott König, Reinbek, 1962.

---. *Being and Nothingness*. Translated by Hazel E. Barnes, Simon and Schuster, 1992.

Schmidgen, Henning. *Die Helmholtz-Kurven. Auf der Spur der verlorenen Zeit*. Merve Verlag, 2010.

Scherer, Bernd. "Die Monster." *Das Anthropozän*, edited by Jürgen Renn and Bernd Scherer, Matthes & Seitz Berlin, 2015, pp. 226–41.

Serres, Michel. *Der Parasit*. Suhrkamp, 1981.

"Smartdust." *Wikipedia*. 29 Aug. 2018. en.wikipedia.org/wiki/Smartdust. Accessed 2 May 2018.

Tholen, Georg Christoph. *Die Zäsur der Medien*. Suhrkamp, 2002.

Varela, Francisco. "The Nervous System as a Closed Network." *Brain Theory Newsletter*, no. 2, 1977, pp. 66–7.

Uexküll, Jakob von. *Theoretical Biology*. Harcourt, 1926.

---. *Kompositionslehre der Natur. Ausgesuchte Texte*. Suhrkamp Verlag, 1980.

Waldenfels, Bernhard. *Bruchlinien der Erfahrung*. Suhrkamp Verlag, 2002.

Wieczorek, Stefan. "Transmedialität. Eine Begriffsskizze." *Werkzeug – Denkzeug*, edited by Thomas H. Schmitz and Hannah Groninger, Transcript, 2012, pp. 31–50.

Suggested Citation

Daniel Fetzner is a media artist and media scientist. He is Professor for Design and Artistic Research at Hochschule Offenburg and Head of the Media Ecology Lab.

Martin Dornberg is a philosopher at Freiburg University and researcher/medical practitioner in the field of psychosomatics and psychotherapy.