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COVER SHEET

Living Lines of the Barely Noticeable

Linde Ex

Abstract:

Living Lines of the Barely Noticeable is a long-term artistic research project aiming to develop distinct artistic approaches to relate to and interact with flying insects and provide the artistic research with a theoretical and practical context by reflecting on relationships and connections with the more-than-human world that occurred within the research.

The research aimed to explore ways and manners, that can contribute to more meaningful relationships with a more-than-human entity. This resulted firstly in approaches that explored ways to relate to flying insects: reflective attempts studying glimpses and tatters of 'insectness' and the circumstances that shaped the way we related to each other. Secondly, I developed approaches that explored manners of being close to (or intimate with) flying insects. These approaches involved more active, hands-on experiments and attempts to interact with flying insects.

Keywords:

flying insects, artistic research, interdisciplinarity, ecology, biodiversity, environmental awareness, embodiment, imagination, autoethnography, dance, installation, drawing, biology, Object Oriented Ontology, phenomenology, other-than-human

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Original page description: The original page has a grey background, fading from light at the top, to dark at the bottom. The author has arranged sections of text and clusters of images and videos on this large canvas format. The text blocks are connected by a wavy line that represents the flight of a winged insect, and leads us through the exposition, brushing past or winding through the clusters of documentation along the way. The images are presented in oval frames, suggestive of ideas or 'thought bubbles' and they include photography of the author's notebooks and documentation of work in progress, alongside stills from video material and photographic works. Similarly diverse are the videos which range from single-shot field-notes, to carefully edited documentation and video artworks. The audio-visual media are placed alongside the main body of the text expanding the text's argument, evidencing process and giving context. At the end of the text we are invited to access the bibliography on a separate page.

LIVING LINES OF THE BARELY NOTICEABLE

by Linde Ex

Living Lines of the Barely Noticeable is a long-term artistic research project aiming to develop distinct artistic approaches to relate to and interact with flying insects, and to provide the artistic research with a theoretical and practical context by reflecting on relationships and connections with the [more-than-human world](#) that occurred within the research.

The research consists of two parts. The first part lasted almost two years and involved [travels, fieldwork, documentation](#), and the creation of several artworks. This project was funded by the George Verberg Stipend (now Groninger Visual Arts Stipends) from the municipality of Groningen, the Netherlands. The second part of the research consisted of autoethnographies complementing the artist-led research of the previous years and is part of my artistic PhD at the University of Groningen and the Hanze University of Applied Sciences Groningen, which resulted in this exposition for *JAR*.

The research is based on two initial experiences: seeing flying insects above a field, which instilled a longing to connect to and engage with them, and reading a scientific research paper about the severity of insect decline, which instilled a feeling of urgency (Hallmann and others 2017). The subsequent research process involved activating and exploring my longing to connect and to expand the feeling of urgency and move towards action/into agency.

Ways to relate and manners of being close to flying insects

Insects are essential in the food web, for instance as pollinators and as food for birds. Also, the functioning of ecosystems is highly dependent on insects. The declines reported over the past decades have impacted food production, biodiversity and ecosystems worldwide (Hallmann and others 2017). However, insects also spread potentially lethal diseases such as malaria, dengue, and bubonic plague, which makes them dangerous. This is particularly the case when a specific species of insect grows beyond control and becomes a pestilence, which is in many cases also a result of habitat loss as a result of intensive agriculture, climate change, and the use of pesticides (Sánchez-Bayo, 2019). Our perception and feelings towards insects are, therefore, ambiguous/not merely positive.

As well as being a real and potentially deadly threat, insects are often shunned and seen as unpredictable, strange, and frightening when they are not dangerous or threatening to humans. Insects are part of our daily lives, but especially in a Western context, insects are ignored and disregarded until they get too close and threaten our human-oriented environment. Like the mosquito, fly or wasp we swat.

In her book on human–insect relations, the environmental educator Joanne Elizabeth Lauck writes:

'We [...] turned into an absolute belief the simple assumption that what is strange or unknown may be dangerous (a cautionary stance in previous cultures). Then we added to it, attributing an evil intent to the strange and unknown. It is understandable then that we view the often bizarre-looking, multi-legged creatures suspiciously and arm ourselves against them.' (Lauck 1998: 4)

Yet the very perception of insects as strange, unpredictable, and bizarre, which is a reason for distancing ourselves, can also be an opening for entering into relations with the more-than-human world. This more-than-human world of relations is weird and insects are, because of their perceived attributes as strange and other-worldly, an interesting guide into the magic unpredictability and weirdness of the more-than-human world.

The research aimed to explore ways and manners that can contribute to more meaningful relationships with a more-than-human entity. This resulted first in approaches that explored ways to relate to flying insects: reflective attempts studying glimpses and tatters of 'insectness' and the circumstances that shaped the way we related to each other. Second, I developed approaches that explored manners of being close to (or intimate with) flying insects. These approaches involved more active, hands-on experiments and attempts to interact with flying insects.

Beyond correlationalism and anthropocentrism, and into relations

I theoretically ground this research in phenomenological approaches, largely based on the phenomenology of the philosopher Maurice Merleau-Ponty, as well as ideas stemming from New Materialism (Jane Bennett) and object-oriented ontology (Timothy Morton). I didn't start the project with these philosophies as guiding principles through the research process (although I was familiar with the ideas), rather they emerged from the artistic process when I

reflected upon it later. Leaning on phenomenology on the one hand and New Materialism and object-oriented ontology on the other may seem somewhat contradictory. Phenomenology is generally seen as understanding reality or the world through a first-person (and therefore sometimes viewed as anthropocentric) experience of phenomena: the world as accessible and understandable only through the human experience of correlations. Object-oriented ontologies sometimes disregard phenomenological approaches because of this correlationism. Object-oriented ontologies claim that objects are real, vibrant, and active beyond human experience, and that there is no access to absolute knowledge of the world (Morton).

During the research, however, I found that both perspectives were interrelated when I focused on the places where they overlap and enforce each other, rather than where they (supposedly) oppose each other. I am not alone in this approach. In his book *Weird Wonder in Merleau-Ponty, Object-Oriented Ontology, and New Materialism*, the philosopher Brian Hisao Onishi argues for expanding the possibilities of phenomenology beyond anthropocentrism and correlationism and including object-oriented approaches. According to Onishi, Merleau-Ponty already describes an operative intentionality not only in the subject's first-person perspective but also an intentionality that 'is already distributed and already involves other nonhuman actors' (2023: p. xxii). So, both Merleau-Ponty and object-oriented ontologies accept that there are 'others' or 'objects' out there that are charged with meaning prior to conscious reflection. They are, however, never completely accessible or known because they are 'always behind, or after, or between the aspects we see of it' (Merleau-Ponty 1968: 136). Everything, whether it is an insect, an atom, or a ray of light, presents itself to us and to others only through specific qualities sensible to that moment and occasion.

How then do real objects that cannot be fully perceived or understood interact and relate to each other? The object-oriented ontology philosopher Morton introduces the term 'aesthetic dimension' to understand this causality. Morton states that: 'If things are intrinsically withdrawn, irreducible to their perception or relations or uses, they can only affect each other in a strange region out in front of them, a region of traces and footprints: the aesthetic dimension' (2013: 17–18). According to Morton, all causality is aesthetic. This aesthetic dimension can be understood as a field, matrix, or possibility for real objects to relate to each other. Onishi compares it to Merleau-Ponty's concept of 'the flesh of the world': 'flesh is the aesthetic, a field of communication between objects that maintains the reality of objects while allowing for a dynamic and generative tension of identity and difference' (Onishi 2023: 41). Phenomenology, then, can be a way to engage in this field of relations. Not in a passive observant way, but in an active and maybe even emphatic or caring way. Morton describes the necessity of the return to phenomenology as follows:

'[T]here is no privileged place outside of reality from which we can view it correctly. OOO [object-oriented ontology] cashes out this principal tenet of post-structuralism better than post-structuralism did. By returning to phenomenology, OOO allows for an all encompassing 'sincerity' that makes cynical distance impossible.' (2013: 104)

In this aesthetic dimension of causality — the flesh of the world matrix — objects group, bump into each other, forming new objects, new realities. In the research process, I, as a person, an object, an organism filled with other organisms, am part of this field of relations through my attempts (ways or manners) to engage because 'the phenomenological approach requires a cycling, iterative style that examines things again and again, now with a little more detail here,

then with a little more force there' (Morton 2013: 37).

Bringing this consideration back to flying insects means that during the research process, I attempted relation-making with flying insects and everything in the realm of relations that is connected, over and over again, through imagination, through sharing the same physical environment, through interacting with their physical bodies, through movement, through translating impressions, etc. This process created new relations and new realities. The insect is out there as an unknowable object, but within the matrix of relations, there are traces and qualities of 'insectness' that come across, merge and collide with my attempts to relate and come close. The aim of the research was not to 'speak with the voice' of insects, to 'understand' insects, or to 'claim to know or make insects' but rather to actively engage in relation-making with insects, acknowledging my mere human possibilities of doing so.

Weirdness, enchantment, and agency

When referring to reality and the matrix of relations, I borrow Morton's term '[weird](#)' to highlight unpredictability, strangeness, and wonder. As we discover more and more, for instance through quantum mechanics, the world is weird. Enormous amounts of dark matter continuously go through supposedly solid physical bodies, particles can be in two places at the same time, etc. And a weird world asks for weird approaches and weird engagement. When the weirdness of the world is acknowledged, it is impossible to approach it with a limited set of tools that claim to generate true and reliable outcomes. This approach would enforce a 'characterization of the world as disenchanting', as the political theorist and philosopher Jane Bennett describes in *The Enchantment of Modern Life: Attachments, Crossings, and Ethics* (2001: 3). Such a world can be measured and analysed and doesn't acknowledge mystery, magic, and wonder. Such an approach highlights causality and therefore the urgency of action but has trouble engaging agency or even ethical responsibility. Attempts to make relations and be close to flying insects were moments in which I tried to connect to the enchanted world. Bennett writes:

'Enchantment is something that we encounter, that hits us, but it is also a comportment that can be fostered through deliberate strategies. One of those strategies might be to give greater expression to the sense of play, another to hone sensory receptivity to the marvellous specificity of things. Yet another way to enhance the enchantment effect is to resist the story of the disenchantment of modernity.' (2001: 4)

I see the attempts to relate and interact with flying insects as attempts to explore these strategies. This process, according to Bennett, has the possibility 'to propel ethical generosity' (2001: 3). When the aim is not to know the other, or to speak for the other but to engage in active relation-making with the glimpses and traces of 'otherness', these actions get an ethical dimension. It is not about passive knowledge gained about the other or the force of human needs forced upon the other but about tapping into the subtlety and responsibility of being a force in creating new relations and new realities in an enchanted world.

Writing a process of relation making

The autoethnographic writing in this exposition follows my attempts at relation-making, in the process of writing about/up memories, reflections and relations. I found myself confronted with perceptions that persist in seeing insects as 'the other' and traps where I objectify or try to

speak for 'the other' that are engrained in my Western educational training to approach the world. The exposition is, however, also an account of the modest and sometimes clumsy efforts to overcome this me–other binary and to engage in relation-making as a process of revealing the enchantment in a world filled with the agency of many.

In PART 1, I engage with the subtle or barely noticeable perception of flying insects, and I consider the perceived other-worldly attributes of insects and the possibility of this perception to spark imagination and, through that, to connect to the weirdness of the web of relations.

PART 2 focuses on approaches that relate to flying insects by collecting data and constructing patterns of these measurements. Here, I introduce a series of drawings on flight patterns.

I further explore imagination as a way of relation-making in PART 3, when focusing on the scale of flying insects, which opens a realm of miniature imagination. I connect this to the possibility of relation-making beyond physicality. Is it possible to connect with 'insectness', without insects physically present? Can environments, materials such as light, and attributes such as movement extend the relation-making beyond the physical objects of bodies? In this part, I introduce an installation exploring reflections of light.

In PART 4, I return to the human body as a possibility of embodied relation-making. Here, I discuss my collaboration with a choreographer and dancers exploring movement, resulting in video works.

The environment that humans and flying insects share is discussed in PART 5. The everyday encounters in shared space pose questions about human and insect needs, urgency and eventually relation-making through agency and care.

Follow the flight line...

PART 1

WAYS TO RELATE: Ghosts, faeries, weirdness

PART 1-I

Here is the beginning, the moment where it all starts. A moment that will tip over in a chain of thoughts, associations, experiments, inquires, travels, production, and years of work. But I don't know that yet. For now, there is only this experience, an encounter.

A glimpse, a scatter, a flickering. I focus, try to follow. Movements. They fall apart in broken light, in silhouette dots against the sky. They rise, they swirl, they drift and dissolve in a background of loudness.

Mixed-media: A cluster of a video and two, ovally framed, images. The video shows insects flying into and out of camera shot, resembling black spots against a grey sky. The images depict an aerial map of a field, one photographic and one as a line drawing. Images

and video relate to the work *Attempts to Uderstand a Field*, 2019. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303568> to navigate there.

PART 1-II

I am in a field, a field in the northeast of the province of Groningen, The Netherlands. The field belongs to an organic dairy farm, and I have been studying it for months. I collect, connect, and try to be as open as possible to what the field will present to me.

It is a grey day in January, and I have been in the field for hours. I am longing for some warm tea that I brought, and shelter, so I withdraw into the safe and dark space of a shed at the edge of the field, where I made base. From the comfort of the shelter, I see the field differently. Whereas *in* the field, I was primarily focused on the ground, the grass, the paths the cows engraved in the green tapestry, measuring the land and collecting different species of plants, I now experience the high open soft grey sky above the field in this flat land. And since I am alone and I am the astir type, I get restless and start to make videos with the soft grey sky as a background.

First, I notice the things that are loud, audibly loud and visually loud. I observe the electricity poles with their wires vertically following the horizon, geese in v-formation flying over with their loud honks, the tree silhouettes. Then, I notice an insect caught in a spiderweb at the door opening of the shed. I start filming. The six thin long legs pointed upwards in sharp angles, the curved silhouette body trembling, vibrating in the elastic, almost invisibly thin strings of the spiderweb, the bleak sun that sometimes carefully lights up behind the light grey clouds, subtly changing the scene.

And as I am there, observing, filming, replaying the recordings, busy... I notice a glimpse.

A diffuse, unsharp dot whirls in the background, and another one. My gaze clings to these small, phantom smudges that now and then appear, but they seem to always detach themselves from my gaze. They dissolve in a background of loudness. A background where everything is more present, shouting, repeatedly whispering, murmuring, asking for attention. The sun, the sky, the wide-open field, the wind, the drops of dew, the smell of the earth, they present themselves firmly in the perceivable space around me.

What I see is ghostly. Diffuse, transparent almost and visible only for moments, glimpses, tatters. These aesthetic qualities of the flying insects that swirl by evoke something in me. It is a first embodied feeling of longing to come [closer to another body](#), even as small as this. I remember this feeling from childhood, I had it with plants, with trees. I wanted to know the plant, smell it, eat it, read about it, use it for potions and pigments. But then, I was driven by a tactile exploration, a connection through materiality. Here the materiality seems almost absent. The insects flying by are volatile and temporal. They seem further away, stranger, other-worldly.

Maybe paradoxical, but the world of the other-worldly, the magical, is a world that feels both familiar and comforting to me. I grew up in a household without television but filled with books and images of faeries and magical figures. The similarities between insects and faeries have been seen as synonymous by Western [composers and artists](#), especially at the end of the nineteenth century. Francesca Brittan says about the similarities that were perceived in the

nineteenth century between flying insects and faeries: 'Both were housed in a space of magical smallness, a place of invisibility and inaudibility, of transparent forms and "noiseless harmonies" renderable only by an ensemble more nimble and quick than any before it.' (2011: 547)

PART 1-III

After an hour of filming and looking over the field, I decide to leave the warm, musty shed and search for the flying creatures that I only saw as ghostly dots in the background till now. The sun is already setting, the air is damp, and the field feels like it is holding its breath.

I only have to walk a couple of steps before I reach them. They move in a small group a metre above the ground. Not smudge dots any longer. I can see their bodies. The wings dark and bigger than I expected. Impressions of legs, bodies, antennae. The specifics of their movements also become clearer; they seem to bounce, up and down, and spiral around each other while gradually moving place.

I stand there, feet on the soft surface of clay and grass, layers of clothes as a shield against the elements, head in the moist afternoon air. If I lift my hand, I will be among them. An element in their swirling dance. They seem even more alien, strange, weird, from up close. The differences in physicality, materiality, and movement between them and me seem to expand. And I start to feel weird, a giant body, wrapped in protective layers against the atmospheric conditions they seem to live in so fluently.

At the same time, I feel a need to be part of their world. Or am I already? There is an ambivalent feeling of a distance between me and the insects and a deep entanglement with them at the same time. Some sort of a scale of otherness where, like in a quantum mechanical reality where a particle can be in two places simultaneously, everything is connected and falls together while at the same time, there is a clear distinction between me and others.

This feeling of distinction between me and the flying insect others and at the same time a feeling of connection with them is not something I experience often. Especially not with these volatile, fast-moving and strange others. Others that seem weird.

Morton calls all ecology 'weird' (2018a, 5). This is maybe true on an abstract, conceptual level, but not everything is perceived or felt by humans with the same weirdness. A loud zooming housefly with six segmented legs, an outer skeleton, a glossy black eye that consists of thirty thousand small eyes, which moves always quicker and in more surprising ways than you expect, is so much more different from our body than, for instance, a dog, who has facial expressions we can make sense of, a similar skeleton, similar eyes and of which we can relate to the repertoire of movements. In her theory of empathy, Edith Stein (1989) underlines that empathy becomes stronger when a body of a similar type is perceived. Although I wouldn't describe this experience as an experience of empathy, the process of perceiving the other and experiencing a flickering sense of connection is a way to relate.

Very differently looking, bizarre-looking, dangerous-looking, but also miniature and elusive in their movements, insects have a palette of attributes that make them strange, other-worldly and weird from a human point of view. Once I noticed them in all their faerie, nimble

strangeness, they took me on a path of imagination, a process that was fuelled by a certain felt connection at that moment. It is an imagination that connects my world and my body to other worlds and other bodies. Worlds and bodies that reside in a liminal space between the tangible world and fantasy, between materiality and impression. Maybe this imaginative process is my point of entry into ways to explore closer relations to flying insects.

PART 1-IV

And as the insects gradually dance away over the field, till they dissolve in the backdrop of landscape, my thoughts and feelings about ghosts, fairies, and weirdness, remain.

PART 2

MANNERS OF BEING CLOSE: Objects, patterns, data

Mixed-media: A cluster with a video and a video still from *How to Connect with Strangers?* 2018. The image and video depicts close ups of dead winged insect on a vibrating, white piece of paper. The insect's bodies gradually fall to pieces due to the vibrations. The sound track is a quiet rhythmic beating, reminiscent of a human heartbeat, which gets stronger through each sequence. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303574> to navigate there.

PART 2-I

Before experiencing flying insects in the field as misty, moving shapes, I already developed an interest in these invertebrates.

My interest in insects started with noticing their lifeless, still bodies on the windowsill of my studio. Dead flies. The direct sunlight emphasised their petrol-like colours. What was once a moving, whirling tatter that sometimes maybe softly soured my consciousness now had become objects with details and colours. Objects that were ready to be investigated, measured, reviewed, shivered upon, and admired.

I made some works of art where I explored the materiality and aesthetic qualities of the collection of insects I had gathered over the years. I studied all kinds of insects under microscopes. I photographed the collection with special macro lenses. I explored their colours, [how they are perceived in media](#) and their brittle, delicate materiality. In the project [How to Connect with Strangers?](#) I filmed the remains of insects on a paper tympan vibrating from the sounds of my heartbeat coming from a big loudspeaker. In the videos, I assembled parts of insects with my hands, after which they fell apart because of the vibrations. Here my incredibly big and clumsy fingers had to move around and physically interact with material and a body that was in size, delicacy, lightness, and vulnerability so far from mine.

All these experiences with the still, dead insects stirred my thoughts about connecting to other worlds, magical encounters and fantastical entities. For instance, this becomes clear in the title

of the work *How to Connect with Strangers?* Here, I was aligned with the early nineteenth-century idea of microscopy ‘teetering between the scientific and the fabulous’ (Brittan 2011: 559).

Images: A cluster of two, ovably framed, images showing different computer representations of flight movement tracking. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303575> to navigate there.

PART 2-II

The experience in the field in Groningen, The Netherlands, evoked such an urge to connect to flying, living, moving insects, that I wrote a proposal for a travel grant to study insect movements. I remembered an article in a newspaper referring to a severe decline in insect biomass. The data presented in the study emphasised the enormity of the problem, a decline of over seventy-five percent in twenty-seven years in Germany (Hallmann and others 2017). To gather data, entomologists had to catch flying insects in malaise traps (tent-like structures where the insects are caught in a small pot with fluids) in sixty-three locations in Germany. I decided to go to the places where movement was stopped to gain insight into insect populations and to study the moving living insects in those same locations. And so, a journey began...

It is day three of my travels through Germany. I have a list of precise coordinates of the sixty-three places where for twenty-seven years insect data were gathered. It is a beautiful morning, and I just had a disappointing search for one of the few locations that I couldn't reach on the travels. I go back to the car that I parked by the side of a small rural road. Sitting behind the steering wheel, I see a big swarm of very small insects that turn and twist around each other in spirals and patterns. Sometimes, they bump into the front window of my car.

They are so close, only the window is between me and the insects, I can see a lot of detail in how they move, but also scraps of their physical characteristics.

In a way, this is an intimate experience. I am very close. Only a glass window separates me from the cloud of swirling insects. It's a constantly changing pattern of life and spirals. I see the individual insects as dots, it feels like a flickering series of snapshots. Stills of moments where they are in certain constellations to each other. It is impossible to follow one movement. The flickering stills of dots in constellations become like drawings where you have to connect the dots. But here the connection is in the incredibly quick movements. Although my mind freezes snapshots of moments to get a grip on the amazing vibrating swarm of life and movement, to freeze the snapshots and look at the connections from moment to moment would [leave out the essential experience of movement and life](#).

The dancing cloud attached to the car window brings me into a state of trance. Bouncing, dancing, whirling, spiralling, multitude, tatter. Very visual. Like watching a screen.

Mixed-media: A cluster of two videos and two ovably framed images from the artist's note books. The first video depicts a swarm of small flying insects, black against a blue sky. The

second, is found footage from an online archive; a slowed down, black and white film of the flight and landing technique of a bumblebee. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303576> to navigate there.

PART 2-III

A couple of months earlier, [I visited a scientist at the University of Wageningen to learn about insect movement](#). I wanted grip. I wanted to understand patterns. How can the ghostly smudges be tracked? How can the dots be connected?

I was looking to find ways to track insect movement, preferably 3D. I did some tests with tracking video material of insects as 2D patterns. It helped me to find some sort of language of lines. There were reoccurring movements, lines forming when I connected the dots.

The trip to Wageningen expanded my understanding of the repertoire of insect movements, also in 3D setups. Florian Muijres showed me the laboratory setups where at the time primarily bumblebees, bees, and mosquitoes were studied. Flying insects that are either interesting because of their use to humanity (bee pollination), their threat to humanity (malaria infections through mosquitoes), or because the movements are relatively easy to follow (bumblebees are relatively big). The laboratory made use of glass ‘tunnels’ of about sixty centimetres high, sixty centimetres wide, and two-hundred centimetres long, with three machine vision cameras. In the tunnel, there is usually a ‘target’ like a fake flower filled with sugar water to attract a bumblebee. The cameras are able to follow the movements of an insect with great precision and create datasets that can be analysed to find certain common patterns in insect movement. During my visit to Wageningen, I was provided with a collection of ‘basic’ and ‘common’ movements like the searching movement when an insect is looking for a target, the movement of direct flowing, hovering, etc.

It helped me in the field to recognise patterns, to see more, to be less overwhelmed by the speed and the inimitability of the movement and to follow, as Tim Ingold calls them, ‘[ghostly lines](#)’: lines that don’t leave a trace but are visible only through following movement and imagination (2007: 48-49). But there was still a gap. Morton points to something similar: a gap between the magical vibrating living world of the flying critters and the dots, patterns, and [data that I was approaching them with](#).

In the laboratory, when looking through a camera and in my experience of seeing the cloud of small thunder flies from the car, there is a transparent wall of glass between me and the insects. A wall that makes me see details better, that makes me see patterns better, that allows me to understand the insect in a certain way, as objects, as patterns, as dots that have only to be connected by lines, as ‘thing-data’. The element of aliveness that triggered my imagination in the field is lacking.

As I step out of the car, I want to stretch my arms to be amid the life, the fragility, and the vibration. And I feel the soft touch of a one-millimetre fly bumping into me.

Drawings

I created a series of large-scale drawings on paper to explore ways to create a visual language

of the movements. The flight lines were made with a variety of drawing materials exploring the relation between the material and the flow of the line. The line movements stem from knowledge gained about scientific studies of flight patterns and my visual and embodied experiences with the movements of flying insects in the field.

Mixed-media: A cluster of three, ovally framed, drawings and one video still showing the artist drawing. The drawings, variously using pastel, pencil, graphite, ink, watercolour and fineliner on paper, are monochrome and show wavy, overlapping and intercepting lines. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303577> to navigate there.

PART 3

WAYS TO RELATE: Neglect, smallness, miniature

Video: Video documentation shows light reflections, moving across an ornate ceiling in a space resembling a lecture theatre. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303578> to navigate there.

PART 3-I

It is November 2019. A day that is common and unremarkable in many ways, although there is sparkling sunlight that covers the bare winter city in shimmer. I am in a hurry to be in time to attend a lecture about sustainability. The time goes as it is supposed to, the tick of the pointer exactly every second. I am on time and sit down in the back of the room. Oversight, some distance, room to engage or tune out.

Of course, I start with eager attention to the lecture. Making notes. Attentive listening. On the walls mottled tree shadows and sunlight. A projection of animated life outside the lecture room. The projection screen of ornamented nineteenth-century walls and ceiling creates a threshold where the tangible and the immaterial, inside and outside, backdrop and animation meet. It is quite mesmerising. It reminds me of the 16-mm projector I grew up with as a child. The nails and texture of the wall were always part of the projected stories.

And so, my mind drifts. I glide into the parallel liminal space.

A dot of light appears. Maybe five centimetres in diameter. It moves, interacts with the subtle pattern of dappled sunlight. Sometimes trembling in one place, then abruptly moving, flowing. This is the reflection of a watch. But it strikes me that it is also like an insect. The light dot possesses 'insectness'.

PART 3-II

I have to really ponder my memories to understand where my interest in insects and small critters started to enter my life. I can recall the shivering combination of feeling both scared and enchanted by a crane fly in my room bumping against the window on a summer eve when I was little. I can recall the strange taste of sand and flesh when eating a worm when I was very young. But these are tatters of memories with no real context or time indication.

There wasn't a great curiosity for the world of small critters for quite a large part of my life, unlike people who knew from early childhood that their [affinities](#) would always lead them to [the world of the small](#). I think I saw insects [as so many of us see them](#).

Neglect, incidental annoyances, and sometimes disturbance ending in a deadly hunt for the small unsub.

When did insects transform from the ordinary, the neglected, and the now-and-then annoying, into the magical other?

There were the dead insects, objects that evoked something in me, the thought of all these lifeless insect remains being hoovered up, crumbled into dust, without first an acknowledgement of their beauty, their fragility, and their value, was a first instance in a chain of instances that slowly shaped the changes in my approach. I appreciated and admired their smallness, their nimbleness, their fragility because I experienced the clumsiness and inadequacy of my fingers and body. This clumsiness however also [kept me in the realm of the visual](#).

Like the screen-like experience through the car window of the insects, I, in a way, connected very intimately with insects through visual understanding. But there was still a gap. A gap between visual appreciation and enchantment or even connection.

After studying insects as objects, insects moved on a scale of connection and otherness from insignificant, to small and interesting.

Video: Hand held video footage shows a tarmac road passing through a wood, accompanied by natural sound and bird song. Small flying insects are caught by the sunlight in the foreground, appearing as small luminescent dots. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303579> to navigate there.

PART 3-III

It is travelling day two of my travels through Germany, and months after seeing a light reflection dot that had insect-like qualities. It is early in the morning, but already very sunny. The promise of sweltering heat in the air. I follow a wide sandy path through the woods. Dappled shade, birds chirp and trill, leaves tremble, pulsating life. It feels like everything is preparing for a spectacle.

And there it is. A spectacle. A flickering dance of illuminated miniature creatures. Right in front of me. I stop and stare.

The stage is the sandy path about two metres in front of me. The foliage opens up here for a spotlight of sunshine. A backdrop of green leafage and oscillating vocals. The stage actors are

volatile, fragments of broken light dancing their ethereal dance in the air. Here there is a direct connection to the fairy tale stories I know so well about oblivious humans stumbling into enchanting fairy dances.

Although I know it is insects that I am looking at, I don't see their bodies. They are ovals, circles, pieces of light. I follow the diffuse radiance of the light they reflect. Like the light reflection dot in the lecture hall, I am not looking at the insects as recognisable objects but I see moving light. Light dots and reflections as representations. The 'real' body of the insect with its particular characteristics is not directly visible. But there is an illuminated representation referring to the actual body that takes me to another world.

With the journey, I decided on a way of looking. An awareness of phenomena that are insubstantial, fragile, nimble, and quick. Paying attention. Not the suppressing paying attention that is used to [make you behave and sit still](#). But a paying attention that makes you attentive and receptive. This paying attention is quite a radical act. I had to see and acknowledge phenomena that are easy to [neglect](#). The decision to pay attention, to go beyond the neglect of the ordinary and the small that seems in everyday life a default way of perceiving, opened up possibilities to experience the extraordinary.

But it is not only a mindset that helps to experience otherworldliness and magic. It is also the phenomenon of the flying insects itself that has the capacity to evoke the extraordinary. Once I was paying attention, the insects as a phenomenon shifted from being small and interesting to being [miniature and extraordinary](#). Miniature worlds have special qualities. I was able to daydream and to move '[outside the given field of perception](#)' (Stewart 1984: 54).

PART 3-IV

The daydream stare at softly drifting diffuse lights takes me to another time and place. I start moving, I slowly approach the theatre. Slowly, slowly. I am on the stage. The show is over the moment I enter. I feel the rays of light here, I feel movement all around me. I am part of the movement now. The light dots are everywhere, but I cannot observe them distantly visually anymore. Here it is: 'paying attention to the "being with" in body-to-body presence with Others that makes the present realizably present' (Madison 2006: 324).

Mixed-media: A cluster of three ovally framed images and a video documenting the light and video installation *Living Lines of the Barely Noticeable*, 2021.

The video camera pans smoothly around a dimly lit gallery hall, at first introducing the light reflecting installation, including details of the suspended laser-cut mirror and plexiglass pieces and the hanging rectangles of white mesh fabric. Around half way through the video the camera rests on a video projection in the space, documenting a video/dance performance. The video cuts to an extract from this video itself, depicting performers dancing in the public space.

The images depict, respectively, shapes used for the laser-cut pieces, a handdrawn installation sketch in a notebook and a still from the video.

Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303580> to

navigate there.

Light installation

I tried a variety of light-reflecting installations to play with the idea of 'insectness' as present in association and imagination, and beyond the physical presence of insects. The installation shown in the video is one where laser-cut pieces of mirror and plexiglass of fragments of flight lines rotate in space and reflect light. The white mesh fabric is the material used in malaise traps used to catch flying insects in the sixty-three places in Germany that I visited.

PART 4

MANNERS OF BEING CLOSE: Aliveness, embodiment, relation

PART 4-I

It is my first day of travelling to sixty-three places in Germany where insects were studied for almost three decades (Hallmann and others 2017). I am filled with the vibrating excitement of expectation and newness. It is morning and June. The month when the light evokes thrilling and buzzing life everywhere. The path I am following is going through a small wood with young trees and shrubs. It ends near a shed-like wooden structure. But the coordinates show that I have to go to a place further off the path, closer to the water. I carefully find my way through the shrubs: snapping twigs, dry rustling leaves under my feet, the occasional swaying branch in my face. I enter an open space at the waterside. It feels like a circular room. On both sides is a tree branching over the water hugging the small open space. The trees have left open an aperture within the canopy overlooking the water and the meadows on the land behind. The buzz of abundant life on a sun-filled June day is almost tangible. Flacked shade, rippling water, sticks, grass blades, leaves, movements, everything doubled in reflections and intensified by a soft breeze. A place dense with detail.

Insect life is abundant and very diverse here. From the tiny, almost white creatures that dance in soft clouds just above the ground, to the sharp and abruptly changing movements of the dragonflies just above the water's surface. Some swarm close to a shrub or tree as if attracted to an invisible magnet in the stem. Some fly by with a loud zoom and interrupt my thoughts.

The excitement of adventure and newness on this first day of inquiry slowly changes into a feeling of hopelessness. Why did I want to understand and connect to the movements of *all* flying insects? Maybe just one type would have been enough or even already too much. Why did I decide to study them in their natural habitats? Wasn't I warned in Wageningen about the difficulties of studying insects in nature because of the ever-changing conditions and distractions in natural environments?

I see, hear, and feel scraps, fragments, and pieces of insects, of insect life, and movement. It all seems overwhelming and impossible to grasp.

I make videos. Videos while following the insects with my camera, but they are way too quick and unpredictable. Then videos with a fixed camera setup, but the camera frame is always too small.

I make notes, I make drawings. Drawings of patterns, drawings of lines, but they seem not to fit with what I experience.

And then again, I pay attention and I enter a daydream state. I mumble, talk to myself as in an attempt to explain to an invisible audience what I am seeing and experiencing. The lecture to the invisible audience evolves. Now I make gestures. My hands and arms mimic the insect movements. Flowing, abrupt changes of direction, hovering, searching, wandering, aiming.

Images: A cluster of two ovals framed images show photographic documentation taken of pages from the author's notebooks. Hand written notes can be seen alongside inked lines, reminiscent of landscapes and insect flight paths. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303581> to navigate there.

PART 4-II

Ingold describes manual gestures as a way of 'writing in the air', a way to remember words through body (2007: 135). It is true, I do remember the insect movements that I 'gestured' to this day, but to me, the gesturing is more than a way to evoke memories. It is a way to understand, connect and, as in calligraphy, to 'reproduce in their gestures the rhythms and movements of the world' (Ingold 2007: 133). The states of in-betweenness and ambiguity that also can be found in the weirdness, otherworldliness, and immateriality of flying insects evoke in me an urge to turn to the body to 'grasp' something.

My hand rises slowly, then suddenly drops low to the ground, whirls, scribbles, sweeps up in a spiral. I move my hand in 3D space, the same space the insects live in. In air with wind that is the same air and wind they move in, I encounter the same shrubs and obstacles on my path, move through the same rays of sun and patches of shade. I am a moving body among moving bodies. It is a co-performance, an understanding through [being with and moving with](#). Sometimes we collide in the movements, but I am in interval moments aware of the distance between us. There is no constant in the connection, but rather a series of subtle '[now moments](#)' between bodies.

It is, however, the closest I have felt to this world of the nimble, magical, and quick on my journey. My body is informing my understanding of a world that is in other ways very difficult to access. This embodied enquiry in [gestures](#) of a miniature realm of otherness teaches me something I can't access otherwise. I intuitively start to learn and make inquiries about the world through my body, which has been described as an important way of understanding and learning in many cases (Bresler 2004; Cancienne 2008; Snowber 2016).

As I mumble my descriptions and make my gestures about flying insect life to the invisible audience, things slow down. Time thickens, place condenses, my senses open. I am repeating [childhood motion and dance moves](#), muscle memory. And I connect in a flickering way, zooming in and out on a scale of otherness, to the movements of these volatile creatures.

In this experience of bodily movement as a manner of coming closer to flying insects I, again, experience the flickering instances, moments of connection. Bennett describes it the most accurately when she speaks of an assemblage:

'Assemblages are living, throbbing confederations that are able to function despite the persistent presence of energies that confound them from within. They have uneven topographies because some of the points at which the various affects and bodies cross paths are more heavily trafficked than others, and so power is not distributed equally across its surface. Assemblages are not governed by any central head: no one materiality or type of material has sufficient competence to determine consistently the trajectory or impact of the group.' (2010: 23–24)

The idea of an assemblage helps me to understand the somatosensory experience of making gestures that started so intuitively. The movements made me part of an assemblage, I acted as part of the movement and that created a 'living confederation'.

Dance performance/video

The experiences of engaging with the flight movements of flying insects through embodied reenactment led to an exploration of these movements in dance. I collaborated with choreographer Niels Weijer to create a set of scores and rules based on my research of flying insect movement for dancers to work with when making improvisations. Cameras were strapped to the dancers to record movements from the body and perspective of the dancer. The performances were also recorded from a drone for a more distant perspective. The parking garage in Berlin with the clear grid of lines and barriers references the fragmented landscape that is one of the causes of flying insect decline. Dancers involved were Niels Weijer, Akiles, Hannah Schillinger, and Anni Lattunen.

Mixed-media: A cluster of one video, two video stills and two photographs

The video and video stills shows documentation from a video/dance performance in 2020.

One image shows a group meeting in the public space preparing for a performance in 2019. In the other image entitled *Foundlings* and dated to 2018, a black and white photograph in an oval frame shows a winged insect crawling on the inner forearm of the photographer.

Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303582> to navigate there.

PART 5

WAYS TO RELATE: Place, travel, agency

Images: A cluster of two ovably framed black and white images showing a notebook page

and a graph full of numerical data. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303583> to navigate there.

PART 5-I

These travels were about movement, insect movement, and finding ways to relate to and interact with a vibrant living world of insects, as a human. But I was not studying insect movement in general, I was studying flying insects within the framework of certain specific locations, specific places that are rich with details and contexts that have influenced the flying insect biomass data from the paper by Hallmann et al. (2017). How did these sixty-three individual locations shape my experiences of the flying insects in these places? And how did the whole journey of travelling from place-to-place influence my understanding of human–insect relationships?

For my understanding of ways and manners to relate to and interact with flying insects, the framework of places that I visited was very important. It provided me with a conceptual idea of encountering life and movement in the very places where life and movement were stopped to gain very important research data. Furthermore, the travel itself with a repetition of transport between two places, arriving, experiencing and looking for insect life, brought a cadence: a rhythm that resulted in a focused presence at each place and a feeling of connection between the places, and therefore between the experiences. And finally, because the places are the environments that the flying insects live in and with, visiting the places gave a rich understanding of the context (of landscape, habitat, vegetation, etc.) of insect life.

The importance of the immediate surroundings for insect life is not only something I experience, Hallmann et al. (2017) state in the paper that [a smaller radius around the malaise traps has a much bigger influence on the data than a wider radius](#).

It is day five of my travels, I am visiting locations thirty-two and thirty-three, which are situated almost in the same location. The journey from the car that I parked somewhere alongside a small rural road to the place indicated by the coordinates is not without obstacles. I can't find any path or road that seems to lead to the locations. In front of me is a ploughed field with hard dry chunks of clay creating valleys and mountain ranges in perfect rows. I try to get around it, on the left side, but the edges of the field are very steep and there are wire fences. I decide that the only way to get to the coordinates (which point clearly to some places in a green patch on the other side of the field on my phone) is through the sharp lumps of cracked soil. I stumble over the field in the heat of midday June, hoping to reach the promising shade of the small trees as quickly as possible.

The edge of the field is sort of a ridge of 1.5 metres deep; I have to wiggle myself through the wires of the fence and slowly find my way down to a small wood of shrubs and young trees. As I am stumbling down the earthy cliff, I look into the beautiful big eyes of a roe deer. I hold my breath, trying not to disturb, but the deer swiftly turns round and runs off in panic, clumsily trying to climb the ridge of slippery soil, nervously attempting to go over and under the fence wire, and then running away over the ploughed grit of soil.

Still impressed and excited over my moment of eye contact with a roe from up close, I continue. I have to cross the grove. The ground is very uneven and covered with herbs and

shrubs. Nettles, brambles, grasses. I carefully place my feet, while holding on to trees and high grasses, finding my way step by step. Once across the grove, the landscape opens to a circular open area surrounded by trees and dotted with bushy young trees and clumps of high grass surrounded by spongy humus soil. I have to jump from one clump of grass to the other to prevent my shoes from getting soaked. The ground slopes towards a pool of water in the middle of the open space.

And there, it is as if I have entered a secret place, hidden and full of life. From the hot, bare, ploughed field to the stumbling journey through the grove and into the maze of grass islands, I am now in a circular oasis of green. Layers, and layers, and layers of green tones with different leaf shades and textures.

To my left, a group of insects is whirling, sometimes moved as a group by a flare of wind. Insects are passing by, and I hear their vibrating wings, buzzing. It feels like a world within a world. A world that cannot be accessed by a path or be understood from the wider landscape. It is a sanctuary amid a landscape grid that divides the surrounding land into understandable shapes of land.

Video: Video documentation shows lush green foliage, accompanied by natural sound and indistinct bird song. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303585> to navigate there.

PART 5-II

The journey followed an orderly list of coordinates pointing to a variety of places where insects were studied for twenty-seven years. I prepared for the travels by studying maps. The red pointers on the interactive maps indicate the places I have to visit. They are situated in a patchwork of grey, green, and beige squares, parallelograms, and triangles, sometimes interspersed by a meandering line. All these shapes are divided by roads, as straight as possible, sometimes a bit more erratic, following terrain that is not visible in a satellite view.

I didn't have a personal relationship with these specific places. I was there because of an indicator, a dot that points to a place. I was not wayfaring/wandering, a way of moving/walking on which Ingold reflects at length, but primarily transported myself from [dot to dot](#). The small walks of between fifteen minutes and two hours to specific coordinates, the short timespans that I did walk and wander (because I didn't follow a predefined path or road, but I had to find my way through the landscape to a location) did, however, provide me with a better understanding: a series of layered experiences that introduced me to the place and the situatedness of the place. I got a sense of the landscape fragments and their scale, climate, smells, transitions, and boundaries by wandering through them. I experienced the borders of landscape fragments that I crossed: fields, meadows, groves, farmland, industrial sites, woods, and cropland divided by ditches, fences, roads, and barbed wire. The fragmentation of the landscape was very tangible, as was the contrast between the agricultural and industrial fragments and the small nature reserves in the midst of all that. Hallmann et al. say about the fragmented landscape:

'The reserves in which the traps were placed are of limited size in this typical fragmented

West-European landscape, and almost all locations (94%) are enclosed by agricultural fields. Part of the explanation could therefore be that the protected areas (serving as insect sources) are affected and drained by the agricultural fields in the broader surroundings (serving as sinks or even as ecological traps).' (Hallmann and others 2017)

The influence of (agricultural) fragmentation of the landscape on insect death and biodiversity loss is found and described in many other studies (Kruess and Tschardt 1994; 2000; Benton 2002). Because of the repetition of walks in a fragmented landscape, the fragmentation did not stay an abstract fact to me. Fragmentation was not only described or visually represented but also became a felt experience of what fragmentation means in a landscape. Short strolls where I found myself in very different snippets of land. After visiting more places, the dramatic outcome of the study by Hallman et al. (2017) became also more tangible: the striking lack of insects.

I have described encounters with living flying insects: sometimes an abundance of life in many forms. But in many places, I visited, there was no movement. Yes, maybe some perfectly trimmed blades of grass that slightly bend in the wind, a pigeon looking for seeds in a freshly ploughed field, a car moving past on an asphalt road, but no insects.

PART 5-III

It is very early in the morning and day seven of my trip. The sun just came up on one of the longest days of the year. I have a full day ahead of me with long journeys, so I have a quick breakfast of fruit and hurry to my first coordinates, dots number fifty-two and fifty-three. I drive through flat land, fields and fields of young sugar beet, wheat, and here and there a wood contained in a perfect square. I visit a little patch of wasteland that seems to be dedicated to function as a hunting ground for pheasants and then drive alongside a train track to my second destination of the day. The land is flat, as I know so well from the flat land, where I live myself. The sky is high, the horizon follows the curve of the earth and only in the blue far distance, I see some low-stretched hills. I stop on a small asphalt road with crops on both sides, further up the road is a farm sheltered by a wood shaped in a perfect rectangle.

My dot of destination is between two fields. On the left: wheat, about fifty centimetres tall and already turning golden yellow. On the right: the glossy dark green leaves of sugar beet. In the golden field a couple of green weeds who dared the challenge to sprout and grow in the middle of gold, and between the green, a small red poppy. I have a long day to go so I focus my attention on spotting the quick and volatile movements of flying insects. But I see nothing. No insects close to me, not further up in the field, not at the other side of the road: nowhere. And this is not the first time nothing happens.

An impactful scientific paper encouraged me to go on a travel, to experience flying insects in a fragmented landscape. And in the end, the journey, the rhythm of visiting sixty-three places, studying a broad variety of insect life and movement and experimenting with artistic approaches to connect with these flying creatures established not only a sense of relationship but also a sense of agency within me.

As I read more about the ecological urgencies that are influencing insect life and future existence, I start to understand that for me doomsday scenarios, like those described in the book *The Insect Crisis: The Fall of the Tiny Empires That Run the World* are not triggering my

sense of agency, for the ecological catastrophe that is happening (Milman, 2022). It is the repetition of felt, embodied experiences that instils ethical responsiveness.

Whereas an impactful scientific paper had sent me on a mission to travel and experience flying insect life, an experience in a field in the Northeast of the Netherlands evoked the urge of establishing a relationship. It was in the moments of enchantment that relationships through imagination and embodied experience started.

Enchantment as an action, a way of approaching a phenomenon, is something I directly experienced within the project. I needed a state of openness to establish an experience that considered the complexity of the life and movement of flying insects. A state that was able to go beyond previous biases and knowledge about flying insects and that could enable a sensitivity to the 'disturbing-captivating' of the phenomenon of a very ordinary event of seeing flying insects (Bennett 2001: 131). The state of enchantment started processes like imagination and embodied experience in movement. Processes of establishing relationships and therefore of establishing a feeling of care and agency. This is precisely the conclusion of Bennett when she writes: 'I have been suggesting not only that an array of minor experiences in contemporary life enchants us but also that enchantment is a mood with ethical potential' (2001: 131).

As I pointed out before when referring to Morton's concept of 'weirdness', an open state of enchantment can relate to all everyday experiences. Everything potentially has magical, enchanting and weird characteristics that can be experienced. Some phenomena, however, are, because of their aesthetics, characteristics, and manifestations, already closer to the liminal realm where reality and fantasy, materiality and virtuality, evoke experiences of enchantment.

The repetition of minor enchanted experiences with flying insects and processes of establishing relationships led to a feeling of care for the ecological meshwork that we both are part of.

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Image: An image in an oval frame, shows a wide angle shot of landscape. Two fields of crops meet in the centre of the image, the straight border between them stretching to the horizon, where woods can be seen. Click on <https://www.researchcatalogue.net/view/1912102/3025756/1709#tool-3303589> to navigate there.

This accessible page is a derivative of <https://www.researchcatalogue.net/view/1912102/1917948> which it is meant to support and not replace.

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