Insectography: A choreographic crafting of insects and us

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Abstract:

Over the last 400 million years insects have evolved in symbiosis with plants and animals acquiring a diversity of shapes, colours, developmental strategies, and behaviours that inspire and shape human and non-human life. Insects exhibit advanced movements, behaviours, and interactions: they walk, crawl, run, jump, vibrate, fly, and metamorphose, creating intricate movement choreographies. However, in a time of climate crisis and due to human activities, many insects are undergoing fast rate of decline. The research project *Insectography* began to germinate as a way of relating to this critical situation. *Insectography* is an entanglement of "insects" and "choreographic tasks. Engaging with biology, choreography, indigenous, and post-human theories, and performative inquiry, we allowed insectographic processes to emerge as a way of strengthening human and other-than-human connections and empathy. In this chapter we explore the insectographic process as a possibility to extend ideas of choreography as a way of crafting. We emphasise this crafting as a two-way-process between humans and other-than-humans in a more-than-human world.

Insectography is an entanglement of "insects" and "choreography". Through exchanging "choreo" – meaning dance – with "insecto", we take part in the ongoing critique (Forsythe, n.d.; Klien, 2008; Leon, 2020; Lepecki, 2006, 2010) that the dancing human body is essential for the act of choreography. Instead, we participate in expanded choreography, and biology, post-human theories and performative inquiry to allow insectographic processes to emerge. Together, the four authors have backgrounds as choreographers, insect chemosensory biologists, researchers, and educators. In this study we are joined by bumblebees [*Bombus spp*.], little transformer beetles from Ecuador [*Carcinobaena pilula*], and Kung Fu Mantis [*Callibia diana*]. The research questions we ask in this project are:

- 1. How might insects choreograph us?
- 2. How might choreographic tasks make humans engage with insects?

We concretely explore these questions through a series of workshops. The first workshop we engaged with provided the research material for this chapter.

The hatching of motivation and previous research

Our insectographic process emerged from environmental worry that did not, and still does not, want to let go. It further evolved from our curiosity for insect movements and behaviours, as well as critical choreographic explorations that followed. Three of the authors of this chapter have dance backgrounds (Tone, Rose, and Arnhild) and we feel a need to engage more with insects: to really see them, study them, understand them, and value them. The acquaintance with co-author, Helena, a biologist, offered that possibility. All three authors with dance backgrounds have previous experience of choreographic encounters with and explorations

of biological and physical phenomena, such as water¹, the universe² and decay³. Helena, being an insect chemosensory biologist, has a deep awareness about and lifelong relationship with insects. She has spent years observing and studying insects and has deep understanding of their embodied ways of moving, living, and working.

Over the last 400 million years insects have evolved in symbiosis with plants and animals, acquiring diverse shapes, colours, developmental strategies, and behaviours that inspire and shape human and non-human life (Smith & Kennedy, 2009). Having conquered all types of habitats and varied niches, they are by far the most numerous and diverse group of organisms on land (Stork, 2018). Humans cannot live without insects, nor can the human body decompose properly after death. We need insects to fertilize the soil where we grow our food to sustain us, and to bury us and make our corpses ready for new life. We are also indebted to insects for the aesthetics they produce on Earth: flowers, sounds, constructions, shapes and dances, as well as human pain, irritation, fear, and humour. An estimated 1% of insect species interact with humans direct or indirectly (Gillott, 1995). Although humans have long recognized the importance of insects for their wellbeing, negative interactions have granted insects the reputation as relentless pests, competitors for food and fibre, and as threats to health, economy, and comfort. Humankind's preoccupation with survival has led to a focus on efforts to neutralise insect competition and harm, ranging from turning to religious authority requiring the excommunication of insect pest in the Middle Ages (Evans, 1906), to the use of insecticides and DDT (Dichlorodiphenyltrichloroethane) - especially after World War II. However, the hopes of the later approach proved unrealistic with time because of increased insect resistance and negative impacts on ecosystem and human health. The reassessment that followed the frustrated hopes of chemical control led to the concept of integrated pest management that relies on ecological principles, multiple technologies and engages the services of helpful insects (Smith & Kennedy, 2009). Slowly insects are being seen as allies, protecting human health and our crops.

As a result of ongoing environmental crises caused by human activities on the planet, many insects are undergoing high rates of decline (Hallman et al., 2017). A possibility to save endangered insect species requires increased human awareness of insects that are inhabiting the Earth, and who have a right to live and to experience friendly engagement with humans. The research motivation for *Insectography*, then, is based on this environmental worry and an interest to explore choreography as artistic engagement with insects as a way of relating to insects. Insects have a wide range of movement capacities, and these can be explored by humans through choreographic engagement. Through evolutionary adaptation, insects have acquired varied capacities (Engel, 2015): insects walk, crawl, and run, jump, vibrate and fly, and metamorphose. They exhibit advanced behaviours and interactions, combining these basic elements into intricate movement choreographies shaping a myriad of natural life histories.

We have found limited previous research on choreography and insects. One example, however, is from Chittka (2004), who explores insect dances as windows into insect perception from the perspective of experimental psychology. Chittka reports how the perceptual world of animals is often very different from that of humans, since many animals have sensory modalities that humans lack (Chittka, 2004). Even if we know a lot about how insects see, smell, taste, and

¹ Fluid City (2012-2014), <u>https://www.auckland.ac.nz/en/creative/our-research/urn/transforming-cities/fluid-city.html</u>

² SPACE ME/Inclusive Dance Company (2012), https://www.dance-company.no/space-me-2012

³ 200 BILLION AND ONE/Inclusive Dance Company (2016), https://www.dance-company.no/200-milliarder-og-1

hear, understanding how insects perceive the world, is beyond human grasp, since we can only perceive the world through our own embodiment (see for example Nagel's (1974) article 'What is it like to be a bat?'). Later in this chapter, Helena will still try to describe the bumblebee's, little transformer beetle's from Ecuador, and Kung Fu Manti's lived worlds, as if she was in their "shoes". Chittka's (2004) work proposes that some animals do, in fact, describe the world around them through a symbolic dance language. Chittka argues that honeybees show the best example of such language where nestmates through dance communicate with each other about profitable food sources (we will hear about this as Helena voices a bumblebee later in the chapter). An article from Bru-Dominguez's (2019) provides a different focus. Within a feminist framework, Bru-Dominguez studies the choreography Memòries d'una puça [Memoirs of a flea] by Valencian choreographer Sol Picó through Braidotti's post-human concept of becoming insect (Braidotti, 2002). Bru-Dominguez (2019, p. 2) explains how Picó as choreographer has long been interested in incorporating the realm of insects in her work, thereby drawing a parallel between how the insect is associated with processes of transformation, and Braidotti's nomadic subject. These existing studies from Chittka (2004) and Bru-Dominguez's (2019) offer a platform for us to connect with and acknowledge within our own research process.

Expanded choreography

Choreography is the concept for crafting originating in the field of dance. Choreo-graphy has gone through extensive change in meaning since it was first taken into a dance related glossary in 1700, when the meaning of the word was the art of writing down dances (Leon, 2020, p. 69). During the early 20th Century, choreography first came to mean the act of creating a series of human movements in space and time, whereas later its meaning expanded to include the entire staging of dance-based pieces (Klien, 2008, p. 143). Traditionally, choreography was a representational and hierarchical affair: a choreographer's ideas governed the dancers (Klien, 2008, p. 143), who were seen to be objects fulfilling the choreographer's subjectivity, ideas, and pre-planned patterns of movement. However, during the early 21st Century, there has been a paradigm shift in choreographic understanding which is still ongoing - characterized by Hildbrant (2013) as The End of Choreographv⁴. Entrenched within post-human, feminist, critical, inclusive, and decolonial theories and practices, choreography has expanded. This paradigmatic shift implies democratization of choreography, and choreography as agent in society, moving away from the stage as a central space for choreography to happen (Østern, 2018, p. 25), as well as choreography being viewed as non-deterministic and open (Klien, 2008, p. 143). The human body has a tardy connection to choreography, and through western history choreography has used the human body as its main object of manipulation. However, Klien (2008, p. 39), among a range of choreographers and/or researchers (see for example: Dupuis, 2020; Lepecki, 2006, 2010; Forsythe, n.d.; Leon, 2020), argues that choreography can be used as a metaphor for dynamic constellations of any kind, self-organised or superimposed. Choreography can "become a metaphor for observed order in biological systems, for exchange of forces in the world of physics and the interaction of elements in the world of chemistry" (Klien, 2008, p. 39). Klien (2008, p. 5) proposes choreography as a (crafting) aesthetics of change which can be applied to more-than-human spheres, and which can contribute significantly to the ongoing shaping (crafting) of society. Choreography therefore can be used as a way of seeing

⁴ Provocation delivered by Antje Hildebrant at Cue Positions Symposium at Chisenhale Dance Space November 23rd, 2013, <u>https://vimeo.com/80257439</u>

and relating to more-than-human patterns of behaviour, organization, and movement. However, extending beyond what Klien's work offers, we emphasize the embodied and lived dimensions of choreography, as does Monni (2018). Within Klien's view, we see the risk of choreography becoming mainly conceptual. Therefore, within this project we are not so interested in disconnecting choreography completely from the embodied practice of dance. Rather, we enter the project with a criticality and distance to existing ideas of what dance might be and who might be a choreographer, and with an understanding that other-than-human as well as human bodies can engage in dance. Choreography then, as a way of crafting, in this study, is understood as having bodily engagement with a world of constellations, dependencies, arrangements and ecologies (Klien, 2008, p. 1), a system we ourselves are already part of. In this system, we allow insects to choreograph us: to shape and craft us.

Research design / research choreography

As we explore choreography in an expanded way, we can sense our whole way of organizing the project as *research choreography*; a way of crating and giving shape to the research (Simonson, 2021). This research choreography is positioned within *performative research* as a paradigm (Arlander, 2018; Bolt, 2016; Haseman, 2006; Østern et al., 2021), utilizing *performative inquiry* (Fels, 2015) as the main approach to create and analyse research material.

Within performative research we understand research as creation, non-representational, and not aspiring to represent a reality that exists independently of the researcher. The researcher is fully entangled with the research, not only illustrating critically reflective research cognition, but as an affected researcher-body who needs their body to fully understand the researched phenomena. Additionally, the research can be produced, analysed, and presented in diverse modes and materiality, and finally, the research operates on an onto-epistemological level, where the researchable unit is understood as relational phenomena, not separated subjects and objects (Østern et al., 2021).

Fels (2015) describes performative inquiry as "an invitation to attend to what calls us to attention" (p. 478). According to Fels the heart and pulse of performative inquiry are *stop moments* that interrupt, disrupt, trouble, astonish – moments that somehow, on a bodily affected level, make us stop, pause, and pay attention (Fels, 2015, p. 479). Noticing, attending to, dialoguing around, and writing, and thereby creating something new, stop moments invite new possible actions, choice, and potentially transformative change and knowledge production. In this performative research project, we move through the insectographic practice with performative inquiry as a methodological and analytical approach, paying attention to stop moments in the meeting between insects and us.

The performative research material - *Insectography* workshop, January 2021

The concept of *Insectography* began to germinate in mid-2020, and by early December 2020 we shaped the activities that form the foundation of the work that this chapter is based on. We decided that we would have a one-day workshop for the four of us in January 2021, and prior to this there would be pre-workshop activities to form a foundation for the tasks explored. As we are based in the city of Trondheim, Norway, and January usually delivers freezing temperatures, we had to plan a workshop with no actual meetings with live insects. The insects sleep at this time of year. For this first workshop we had to rely on digital meetings with insects through film

clips. The film clips that we engaged with were chosen by Helena from available sources on the Internet.

Three days before the January workshop Helena sent a selection of film clips of insects to Tone, Rose, and Arnhild. Providing us with video links, Helena asked us to watch the videos of the selected insects, and we were each allocated two species to look at each. We all documented our initial responses to "our" insects and prepared two insectographic tasks, one for each of the insects we were looking at, to offer at the workshop. At the same time, we also considered what materials or objects we might want to bring to the workshop to engage with. An insectographic task was defined by us as a prompt to the other three participants to engage with the insect and create movement. On our workshop day we met to work in a studio within a larger theatre complex in Trondheim. The windowless studio created a cocoon for our day of exploration. We began with conversation, and Helena shared the process, tensions, and joys she felt with the responsibility of choosing insects for us. We each gave insight to how we felt about our insects, and how they resonated with us. From our dialogue, we moved into the tasking process. Each task was introduced by the person who created it, delivering as much information and direction as they felt was needed. An example of an insectographic task is shown in Figure 1.

FIGURE 1

Figure 1. Example of an insectographic task explored during the workshop.

Photographer Arne Hauge, who at a later stage became part of the insectographic research group, joined us mid-day, as we wanted to capture visual material from our first workshop on our insectographic journey. We used a Padlet to create, share, and document reflections during the day. A screenshot of the Padlet we used is shown in Figure 2.

FIGURE 2

Figure 2. Screenshot of the Insectography Padlet created during the January 2021 workshop.

Objects and the space were used in various ways in different tasks. Over the course of the day, we played with headphones and self-selected soundtracks, paper, the objects in our bags, high heel shoes and black electrical tape, oil, sugar and spices, chairs and other furniture at the periphery of the space, and yes, we drank hot coffee too.

Performative inquiry through stop moments between insects and us

For Tone, Rose, and Arnhild who have a dance background, we have chosen stop moments during the workshop or workshop preparation that somehow interrupted our everyday non-attentive relationship with insects. These were stop moments that "somehow, on a bodily affected level, made us stop, pause and pay attention" (Fels, 2015, p. 479), moments that made us realize the embodied life trajectories of the insects we were engaging with, and which made us leave the moments with increased embodied insect awareness. In these stop moments we see that the insects are choreographing (crafting) our moment explorations, and that expansion of choreography is ongoing. Helena has taken on the role of giving voice to the Bumblebee, Little Transformer Beetle from Ecuador, and Kung Fu Mantis. In our crafted stop moments Rose, Tone, and Arnhild relate to these in a bodily way. In voicing them, Helena uses her insect biology knowledge, and steps into a first-person perspective of the insects. We know this is not how insects think and feel, as they are embodied differently. However, this anthropocentric move allows us to make a storied connection between the insects and us in this article, in turn possibly enhance a sensation of insect-human-connectedness.

In the three human-insectographic stop moments that follow, we weave the insect-voice filtered through Helena, with the human-voices from Rose, Tone, and Arnhild. The insect-voice (of Helena) has no specific formatting, *whereas the human-voice is formatted with italics*. Each stop moment is first voiced through a photo collage (choreography/crafting) combining photos from the workshop (called "studio photos"), shot by photographer Arne Hauge, with insect footage downloaded from unsplash.com or wordpress ⁵ (called "insect photo"). In this, we visually craft together an insect with a dancer-researcher.

Little Transformer Beetle from Ecuador and Rose entangling in a stop moment

FIGURE 3

Figure 3. Crafting a stop moment with beetle and Rose, with Rose exploring the Little Transformer Beetle for Ecuador insectographic task offered during the workshop. Beetle photo by Katja Schulz on Wordpress, studio photo by Arne Hauge. NB: This beetle is not a Little Transformer Beetle from Ecuador, since it was not possible to find an open copyright image of that specifically.

(See figure 3). So... when I need a rest I turn into this little, almost perfect, ball. I retract my six legs, head and antenna into groves and I look exactly like caterpillar poop, or debris of some type. The rough surface of my body helps the disguise - and no one can spot me. I do the same trick if I spot danger. The hungry enemy walks right by me and disregards me as food. I am quite small, and the smaller one is, the more one is at risk of being eaten by someone bigger. The drawback of this transformer body is that when I walk, I must carry all this carapace, and my legs look unusually broad to be insect legs – and my walk is a bit clumsy. It goes like this: walking... danger? Ball!... unfold... get on your feet again... And that's the tricky part... when on my back it is not just to turn around and be on your feet again. There is lots of bouncing and

⁵ We have used photos with copyright restrictions that allow the photos to be downloaded and used freely. However, the photographers should be credited.

waving with my legs... a little push from the wings... and eventually I am on my way again! As I lay on my back, legs and arms suspended limply in the air, rocking on my spine for what felt like the millionth time - back and forwards, side to side, around and around - it struck me: why had I never noticed the effort that insects put into their work, their activities, their lives? Why had I never pondered how much effort it might take for the transformer beetle to shift from its back to its front? It was only now, as I struggled, gave up, paused, and then tried again that I could sense what these insects might encounter. I rocked and rolled around my spine. My human back was not so happy to be on a hard wooden floor. For a moment I felt that I might have had a hint of sensorial attunement to what this little beetle might feel. The helplessness and determination that coexisted, followed by joy and power when I finally made it to my feet.

Bumblebee and Tone entangling in a stop moment

FIGURE 4

Figure 4. Crafting a stop moment with bumblebee and Tone, with Tone (and the rest of the authors) exploring the bumblebee insectographic task offered at the workshop. Bumblebee photo by Taylor Cowling on Unsplash, studio photo by Arne Hauge.

(See figure 4). *Meeting with the bumblebee through the film Helena sent completely* choreographed my evening the day before the workshop. The bumblebee, the colours, the vibrations, the sounds, and the backgrounds caught my attention. I am a bumblebee worker, a female. We are all females here now. My job is to find food for the "babies" of the queen. It is a busy life from day one. I am born without ears, just like the others, but we feel each other's buzz by the vibration of things and the air, and we have our ways to communicate. You see, we learn with each other by emulation learning... not like the honeybees... and we do not dance. For us it is all in the buzz... and scents. I have found this flower field where we, the bumblebees, can be all by ourselves – no one else is there – I guess it is because those flowers play hard to get. Their pollen must be shaken out of them with a buzz. It is some work, but one gets to be just us bumblebees around these flowers. We mark empty flowers with a scent to let the others know there's no food there before they start using lots of energy buzzing. One must vibrate and shiver the flight muscles a certain way – the right frequency... then all that lovely pollen falls out of the anther. Not many other insects can do that. What I saw was buzz pollination, and in a flash (or flesh), I realized how sticky, messy and juicy the procedures of buzz pollination are. How hard the pollination is. A choreographic impulse popped up. The choreographic "popping" is completely embodied, more like a felt hutch than a clear thought. I needed stickiness, powder, messiness. An oily challenge. I found sugar, salt, turmeric, sand, a bottle of sunflower oil, four empty boxes and four trays for the oil. I was ready to take on the oily, sticky, vibrating, messy, sexy, and very determined challenge that the hard work of a buzz pollination bumblebee invites to. And yes – the flowers are happy too because we carry their pollen to the right place – another

similar flower. We take some pollen to feed our babies, and we help them make their own babies. Works for us.

Kung Fu Mantis and Arnhild entangling in a stop moment

FIGURE 5

Figure 5. Crafting a stop moment with Kung Fu Mantis and Arnhild, with Arnhild exploring the Kung Fu Mantis insectographic task offered at the workshop. Kung Fu Mantis photo by Morteza Bach on Unsplash, studio photo by Arne Hauge.

(See figure 5). In China, martial arts exist based on my movements – they call it "Southern-" and "Northern Praying mantis". Sitting on the floor with crossed legs and eyes closed, I felt as if everything that was running in my life stopped, and I landed in the moment. I started to notice my breath going all the way down to my stomach as I moved and was moved, and how my bottom and legs became heavily rooted to the floor. I could sit like this forever, just sensing, feeling, breathing and being present in the moment. I felt hypnotized, just as if I was the prev of the Kung Fu Mantis. I ambush the prev I patiently wait, slightly rocking my body and my head to detect movement in my surroundings... That's how I sneak into them ... moving really slowly, so slowly that I look immobile... I keep my eye on the target... this way it won't dare move... and when I'm close enough - shush!... faster than your eye can see, I snap the poor thing with my forelegs - and it becomes my lunch. I have good stereoscopic vision - and that allows this hunting way of living. My mobile neck is also helpful as I can turn my head 180 degrees to roam the surroundings and have my body still at the same time ... and all of sudden... This sure has spooked and "frozen" humans, as much as my prey! From recently being the hypnotized one, I then felt the Kung Fu Mantis power of playing with and controlling its prey, and I really felt mindful and being present in the moment.

Crawling, leaping, flying into an insectographic discussion

Within our human-insectographic stop moments, which are intersected and interjected with the filtered insect-voice from Helena, the ways in which insects might choreograph us are drawn out. The adaptation, morphing, and frustrations of the transformer beetle play out in movement that is laboured, the work, work, work, of the bumblebee fosters a choreographic "popping", and the attention and mechanics of a kung fu mantis reveals mindfulness. Within these movements and moments, and explorative co-creation, we sought to explore choreography not as an art form depicting an existing or pre-planned reality, but instead as a set of performative capacities that opened for bodily insectographic movement meetings (Leon, 2020; Lepecki, 2006, 2010). With the help of materials like self-selected soundtracks, high heel shoes,

oil, sugar and spices, walking, crawling, running, jumping, and vibrating, we have sought to allow insects to choreograph us, becoming insectographic. Chittka (2004) offers the view that insect dances are windows into insect perception. Since we as human beings are differently bodied than insects, even though we can learn to know about insects' sensory modalities, we cannot perceive the world the way they do (Chittka, 2004; Nagel, 1974). However, the bodily exploration that arose when we allowed ourselves to be choreographed by bumblebees, little transformer beetles from Ecuador, and Kung Fu Mantis in this study created nearness, understanding and empathy with the embodied life, amount of energy, diligence, and ways of patterning that these little creatures perform. Somehow, the insectographic processes allowed us to touch their lifeworld, crafting with our bodies even for just a tiny, choreographic moment.

As choreography has gone through paradigmatic shifts, the human engagement and narratives about the insect world has evolved and shifted through times. Awareness of the role of these pollinators for human survival, among other things, is fuelling the new narratives of insects, while knowledge of ecology, sensory modalities and life strategies is showing us that we may be not all that different: for example, our sense of smell seems to be quite similar regarding fundamental mechanisms and construction (Hildebrand & Shepherd, 1997). We are also discovering that the "silent majority" of insects that fill the earth, do us only good and share with us the challenges of staying alive right now. We are maybe ready to meet the insects on a common ground and engage with each other in new ways. With this performative inquiry research project moving through stop moments, we have sought to explore and show how choreographic (crafting) tasks might prompt humans to engage with insects.

Insectography, taking part in expanding choreography, enables us to make connection to Braidotti's (2002) change of focus from being, to becoming. In our workshop and the choreographic tasks that evolved, we explored alternative choreographic becomings and insecthuman spaces for us as nomadic, hybrid researcher-artists who are already involved in a process of becoming insectographic (see also Ferreira, 2015). At the same time, Braidotti's (2002, p. 169) notion of "becoming-insect" considers insectoid life in a way that allows transgressive possibilities through new alliances and assemblages. As Wilcox (2017) explains when drawing on Braidotti's notion, becoming-insect is "not in the service of utopian projects but rather to point towards heterotopic worlds of difference and multiplicity" (p. 28). Through choreographic tasks, we see that there is a potential to foster human engagement with insects. While this project is still within the early stages of development, with further explorations in workshops, discussions, readings, and writings to come as the project proceeds, we see that the insectographic offers possibilities for an expanded way of seeing, sensing, feeling, creating and crafting with insects. Ultimately, we offer the insectographic process explored in this study as a way of celebrating and extending ideas and practices of choreography as a way of crafting, emphasising crafting as a two-way-process between human and more-than-humans. The interdisciplinarity of this project entangling expanded choreography, biology, post-human theories and performative inquiry with us, bumblebees, little transformer beetles from Ecuador and Kung Fu Mantis, suggests crafting as interconnectedness among species and extends choreography as a bodily performative process of re-shaping and re-crafting one another.

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